ONTARIO TEACHERS' MANUALS

ART

AUTHORIZED BY
THE MINISTER OF EDUCATION

THE T. EATON Co LIMITED
TORONTO CANADA

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Toronto

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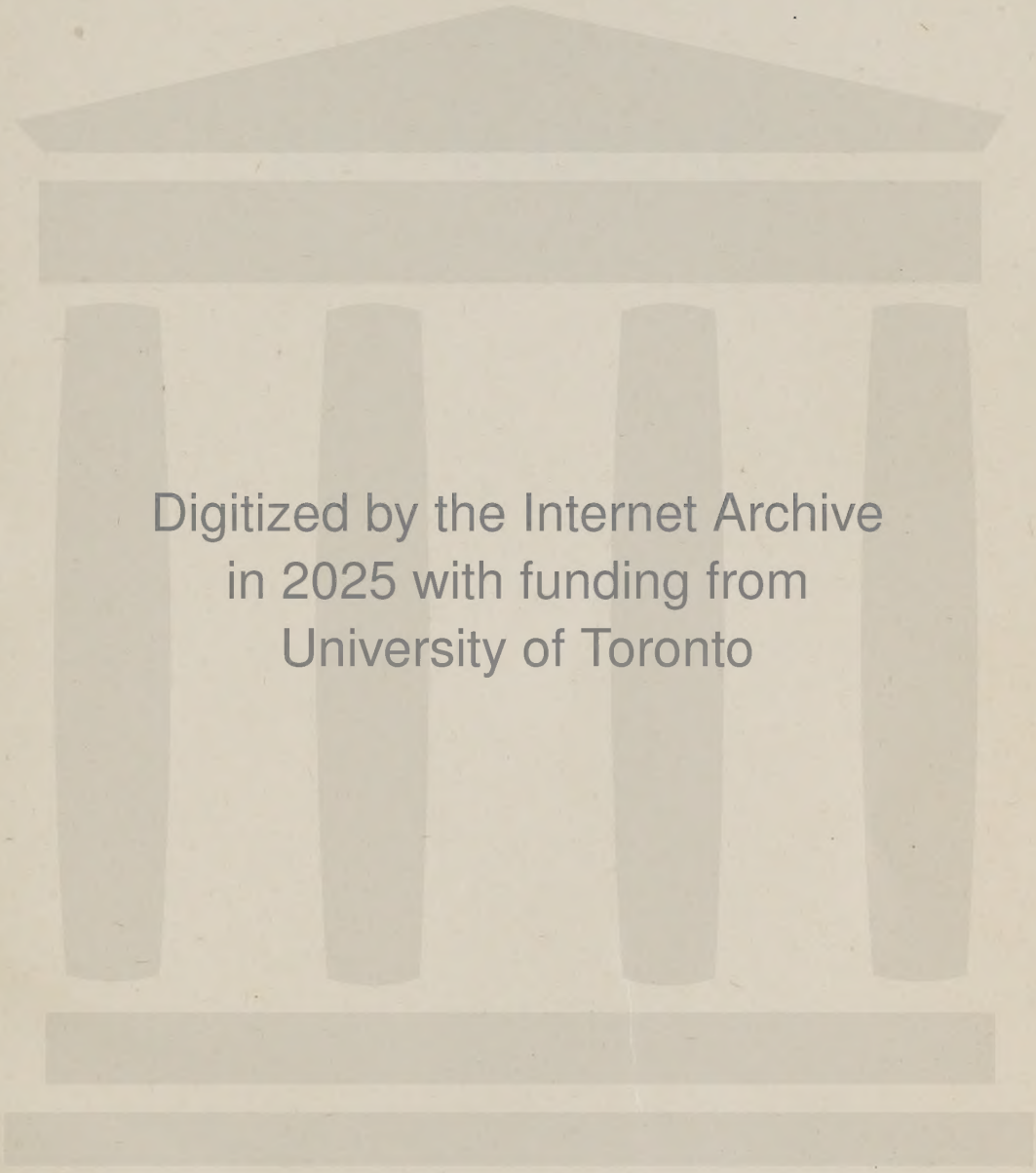
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ART MANUAL

ONTARIO
TEACHERS' MANUALS

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AUTHORIZED BY THE MINISTER OF EDUCATION

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THE T. EATON CO LIMITED
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PUBLIC AND SEPARATE SCHOOL

COURSE OF STUDY

FORM I: JUNIOR GRADE

Freearm drawing with charcoal, coloured chalks, black and coloured crayons, in illustrative drawings and in the representation of natural forms, toys, and interesting objects.

Recognition of the six colours—red, orange, yellow, green, blue, violet.

Simple decoration of constructed objects.

FORM I: SENIOR GRADE

Freearm drawing with charcoal, coloured chalks, black and coloured crayons, in illustrative drawings and in the representation of natural forms, toys, and interesting objects.

Picture Study.

The six standard colours.

Simple design, applied where practicable, to constructed objects.

Single line capital letters.

FORM II: JUNIOR GRADE

Freearm drawing with charcoal, brush and ink, and coloured crayons or water-colours, in illustrative drawing and in the representation of natural forms, other common objects, and simple landscapes.

Drawing of animals and children.

Picture Study.

Tints and shades of colour.

Simple design, applied where practicable, to constructed objects.

Lettering.

FORM II: SENIOR GRADE

Freearm drawing with charcoal, brush and ink, water-colours or coloured crayons, and pencils with large, soft leads, in illustrative drawings and in the representation of natural forms, other common objects, and simple landscapes.

Drawing of animals and children.
Picture Study.
Hues of colour.
Simple design, applied where practicable, to constructed objects.
Lettering.

FORM III: JUNIOR GRADE

Drawing with charcoal, pencil, brush and ink, and water-colours (or coloured crayons), of plants, trees, landscapes, and common objects involving the foreshortening of the circle.
Illustrative Drawing.
Drawing from the figure and from animals.
Picture Study.
Complementary colours, graying of colours, three balanced tones of gray.
Simple design, applied where practicable, in connection with constructive work.

FORM III: SENIOR GRADE

Drawing with charcoal, pencil, brush and ink, and water-colours (or coloured crayons), of plants, trees, landscapes, animals, birds or insects, and common objects involving the foreshortening of the circle and the study of handles.
Grouping of two objects.
Illustrative Drawing.
Drawing from the figure and from animals.
Picture Study.
Scales of five balanced values (neutral or colour).
Simple design, applied where practicable, in connection with constructive work.
Lettering.

FORM IV: JUNIOR GRADE

Drawing with pencil, charcoal, brush and ink, and water-colours (or coloured crayons), of plants, trees, landscapes, objects, and animals.
Illustrative Drawing.
Drawing from the figure.
Freehand drawing of simple rectangular objects.
Grouping of objects.
Picture Study.

Scales of intensity, complementary harmonies.
Simple design.
Lettering.

FORM IV: SENIOR GRADE

Drawing with pencil, charcoal, brush and ink, and water-colours (or coloured crayons), of plants, trees, landscapes, objects, and animals, birds, or insects.
Illustrative Drawing.
Drawing from the figure.
Freehand perspective.
Interesting rectangular objects.
Grouping of objects.
Picture Study.
Making of colour charts and scales of hue, value, and intensity; analogous harmonies.
Simple design.
Lettering.

NOTE.—In graded schools where the Forms are not subdivided into Senior and Junior, the teacher must use judgment in combining the work of the grades so as to simplify it as to quantity and at the same time cover the principles that are involved.

DETAILS OF THE COURSE

FORM I: JUNIOR GRADE

ILLUSTRATIVE DRAWING:

Sentences expressing action, games, sports, holiday experiences, special celebrations, nursery rhymes, and simple stories.

REPRESENTATION:

Simple flowers, twigs, grasses, sedges, and trees, paying particular attention to direction and position of masses. Toys and other objects interesting to children.

COLOUR:

The recognition of the six colours—red, orange, yellow, green, blue, and violet.

In Design, the use of one colour with black.

DESIGN:

Simple borders and all-over patterns for the decoration of Christmas work, etc.

MEDIUMS:

Charcoal, coloured chalks, black and coloured crayons.

FORM I: SENIOR GRADE

ILLUSTRATIVE DRAWING:

Sentences expressing action, games, sports, holiday experiences, special celebrations, nursery rhymes, simple fairy tales, lessons in Readers.

REPRESENTATION:

Simple flowers, twigs, grasses, sedges, trees, landscapes. Birds, animals, children, toys, and other objects.

In this Form particular attention should be paid to direction, relative position, size, and shape of masses.

PICTURE STUDY: (Suggestive List)

The Madonna of the Chair—Raphael; *Woman Churning, Feeding the Hens,* or *The First Step*—Millet; *The Song of the Lark*—Breton; *Prince Balthazar*—Velasquez; *The Divine Shepherd*—Murillo.

COLOUR:

The recognition of the six standard colours—red, orange, yellow, green, blue, and violet; the making of orange by the overlapping of red and yellow; green by the overlapping of yellow and blue; and violet by the overlapping of blue and red; matching colours.

In Design, the use of one colour with black and white.

DESIGN:

Repetition in borders and all-over patterns of simple geometric and flower shapes and other suitable units. The application of these to objects constructed for some definite useful purpose. In patterns, orderly arrangement may be obtained by folding and creasing paper.

LETTERING:

Single line capital letters.

MEDIUMS:

Charcoal, coloured chalk, black and coloured crayons.

FORM II: JUNIOR GRADE

ILLUSTRATIVE DRAWING:

Games, sports, events, experiences, stories.

Illustrative Drawing should be correlated with other school subjects.

REPRESENTATION:

Plants, flowers, budding or leafy twigs, fruit on the branch, with special attention paid to direction, relative position, size and shape of masses, and to character of growth; trees and simple landscapes; animals, children; toys, objects used in the home, vehicles.

PICTURE STUDY: (Suggestive List)

The Sistine Madonna—Raphael; *The Duchess of Devonshire and Her Baby*—Reynolds; *The Sanctuary*—Landseer; *The Shepherdess*—Lerolle; *Feeding Her Birds*—Millet.

COLOUR:

Tints and shades of colour.

In Design, the use of one colour with gray, white, or black.

DESIGN:

The making of units from natural, geometric, and other forms, and their repetition in borders and all-over patterns; measurements involving the use of inches in planning for the repetition of units in patterns. All designs to be planned with the intention of using them for some definite purpose and of applying them, wherever possible, to constructed forms.

LETTERING:

Single line capital letters.

MEDIUMS:

Charcoal, black crayons, brush and ink, coloured crayons or water-colours.

FORM II: SENIOR GRADE

ILLUSTRATIVE DRAWING:

Games, sports, events, experiences. Illustrative Drawing should be correlated with other school subjects.

REPRESENTATION:

Plants, flowers, budding or leafy twigs, stalks with seed packs, fruit on the branch, with special attention paid to direction, relative position, size, and shape of masses, and to character of growth; trees and landscapes; animals; children; interesting objects; vehicles.

PICTURE STUDY: (Suggestive List)

The Sistine Madonna—Raphael; *The Duchess of Devonshire and Her Baby*—Reynolds; *The Sanctuary*—Landseer; *The Shepherdess*—Lerolle; *Feeding Her Birds*—Millet.

COLOUR:

Hues of colour, flat washes, dropped and floated washes.

In Design, the use of two tones of one colour with gray, white, or black.

DESIGN:

The making of units from natural, geometric, and other forms, and their repetition in borders and all-over patterns; measurements involving the use of whole or half-inches in planning for the repetition of units in patterns.

All designs to be planned with the intention of using them for some definite purpose and of applying them, wherever possible to constructed forms.

LETTERING:

Single line capital letters.

MEDIUMS:

Water-colours or coloured crayons, charcoal, brush and ink, or soft pencil.

FORM III: JUNIOR GRADE

ILLUSTRATIVE DRAWING:

Games and sports. Illustrative Drawing should be correlated with other school subjects.

REPRESENTATION:

Twigs or sprays with fruit or flowers, with special attention paid to proportion and foreshortening of parts; trees and landscapes; animals, insects, or birds; children.

Objects in common use, such as pottery, kitchen utensils, etc., chiefly in pencil outline, with careful attention to proportion and foreshortening; Japanese lanterns.

COMPOSITION:

Appropriate size and proportion of sheet, suitable margins, the use of " finders ".

PICTURE STUDY: (Suggestive List)

The Night Watch—Rembrandt; *The Fighting Téméraire*—Turner; *The Gleaners*—Millet; *Sheep*—Mauve; *Spring (Paysage)*—Corot; *The Artist's Mother*—Whistler.

COLOUR:

Complementary colours and graying of colours by complementaries; three balanced tones of gray.

DESIGN:

Units derived from nature or geometry; also stripes, repeated in borders or all-over patterns. Squares, oblongs, diamonds, drop squares, and drop oblongs used in constructive plans; measurements to include inches and half-inches. The colouring in these designs to be two tones of gray or two tones of a grayed colour.

Designs to be applied, where possible, to constructed objects.

LETTERING:

Single line capital letters and numerals, of broad or narrow stroke according to the purpose for which the lettering is intended.

MEDIUMS:

Charcoal, brush and ink, water-colours (or coloured crayons), pencil.

FORM III: SENIOR GRADE

ILLUSTRATIVE DRAWING:

Games, sports, descriptive poetry. Illustrative Drawing should be correlated with other school subjects, especially history and literature.

REPRESENTATION:

Plants or any parts of plants, twigs or sprays with fruit or flowers, or vegetables, with particular attention paid to proportion and foreshortening of parts; trees and landscapes; animals, insects, or birds; children.

Objects in common use, such as pottery, kitchen utensils, etc., singly and in groups of two. These objects should be rendered chiefly in pencil outline. Special attention should be paid to foreshortened circles at various heights, both when seen as ellipses and as parts of ellipses, handles also should receive careful study.

COMPOSITION:

The study of space divisions and margins and the use of "finders".

PICTURE STUDY: (Suggestive List)

The Night Watch—Rembrandt; *The Fighting Téméraire*—Turner; *The Gleaners*—Millet; *Sheep*—Mauve; *Spring (Paysage)*—Corot; *The Artist's Mother*—Whistler.

COLOUR:

Scales of colour, scales of neutral values. Five balanced tones in grayed colour.

DESIGN:

Bilateral units, derived from nature or from geometry, to be used alone or repeated in borders and all-over patterns, and adapted to corners. The conventionalization and squaring of natural forms. For constructive plans, use squares, oblongs, drop squares, and drop oblongs. Colouring in these designs to be two or three values of a grayed colour. Designs to be applied, where possible.

LETTERING:

Plain capitals and numerals with the width planned in pencil outline, to be finished in ink, colour, or a tone of gray.

MEDIUMS:

Charcoal, brush and ink, water-colours (or coloured crayons), pencil.

FORM IV: JUNIOR GRADE

ILLUSTRATIVE DRAWING:

Descriptive poetry. Seasons.

REPRESENTATION:

Careful study of details of structure and texture in plants, flower and fruit sprays, trees and landscapes.

Drawing from the figure and from animals.

Interesting rectangular objects in various positions, studying foreshortening and convergence with the help of pencil measurements and the comparison of slants with the pencil held vertically or horizontally, level with the eye. Vanishing points are not to be used here.

An avenue of trees or a railway track, noticing that all receding horizontal lines seem to meet at a point on a level with the eyes.

Groups of interesting objects.

COMPOSITION:

The composing of suitable drawings from the above list in rectangular areas, so as to exhibit well-related spaces. These should be planned in pencil outline and finished in flat washes, using tones of gray, gray with black, grayed colour, or one colour and black.

PICTURE STUDY: (Suggestive List)

The Sower—Millet; *The Avenue of Middelharnis*—Hobbema; any interesting landscapes; *Saint Barbara*—Palma Vecchio; *Ulysses Deriding Polyphemus*—Turner; *The Golden Stairs*—Burne-Jones.

COLOUR:

Colour circle, scales of intensity, colour schemes of low intensity, complementary harmonies.

DESIGN:

Units of design derived from nature, from geometry, and from abstract shapes. The use of these singly, in borders, and in all-over patterns.

The study of Balance, Rhythm, and Harmony in Design.

The use of oblongs, drop oblongs, diamonds, circles, and semicircles in constructive plans for the repetition of patterns. The colours used in these designs to be complementary harmonies of low intensity or closely related values in grayed colour.

Suitable problems in Applied Design, such as book covers, programme covers, etc.

LETTERING:

Plain capitals with the width planned in pencil outline and finished in black or colour, for titles and initials. The use of the single line alphabet in quotations, mottoes, etc., arranged in two or more lines of lettering. Numerals.

MEDIUMS:

Charcoal, brush and ink, water-colours, pencil.

FORM IV: SENIOR GRADE

ILLUSTRATIVE DRAWING:

Descriptive poetry; subjects suitable for school posters.

REPRESENTATION:

Careful study of details of structure and texture in plants; landscapes or window sketches; drawing from the figure or from animals, birds, or insects; rapid sketches of children.

The study of foreshortening and convergence as seen in landscapes, in the lines of a room or house, and in rectangular objects. The horizon line and vanishing points should be discovered by actual observation. Axes, diagonals, and invisible edges should be used as aids to correct drawing.

Interesting objects, such as baskets and books; the appropriate grouping of manufactured objects, or of one of these with fruit, flowers, or vegetables.

COMPOSITION:

The composing of suitable drawings from the above list in rectangular areas, so as to exhibit well-related spaces. These compositions should be planned in pencil outline and finished in flat washes, using neutral values, analogous colours, or two complementary colours with a neutral.

PICTURE STUDY: (Suggestive List)

The Sower—Millet; *The Avenue of Middelharnis*—Hobbema; any interesting landscapes; *Saint Barbara*—Palma Vecchio; *Ulysses Deriding Polyphemus*—Turner; *The Golden Stairs*—Burne-Jones.

COLOUR:

Making of colour charts, scales of hue, value, and intensity; analogous harmonies; colour schemes from nature and from textiles.

DESIGN:

Units derived from nature, from geometry, and from abstract shapes. The use of these singly and in borders and all-over patterns applicable to stencilling and wood-block printing.

Balance, Rhythm, and Harmony, in Design. The use of squares, oblongs, diamonds, and circles or their parts in constructive plans for patterns. The colouring in Design to be chiefly tones of grayed colour, complementary and analogous harmonies, or colour schemes from nature which exhibit these harmonies.

Suitable problems in Applied Design, such as book covers, programme covers, posters, etc.

LETTERING:

Plain capitals, with the width planned in pencil outline and finished in black or colour, for titles and initials. The use of the single line alphabet in quotations, mottoes, etc., arranged in two or more lines of lettering. Numerals. Roman capitals and small letters optional.

MEDIUMS:

Charcoal, brush and ink, water-colours, pencil.

DETAILS ARRANGED ACCORDING TO SEASON

	September and October	November and December
Form I Junior Grade	Illustrative drawing. Flowers, grasses, and trees in colour. Lessons in colour.	Illustrative drawing. Trees and subjects suitable for Christmas work. Designs for Christmas work.
Form I Senior Grade	Illustrative drawing. Flowers, grasses, and trees in colour. Six standard colours. Lettering.	Illustrative drawing. Trees and landscapes. Picture study. Border and all-over patterns for Christmas and New Year designs. Lettering.
Form II Junior Grade	Illustrative drawing. Flowers, grasses, trees, fruits, or vegetables in colour or in ink. Picture study. Tints and shades of colour. Lettering of name on drawings.	Illustrative drawing. Landscapes with bare trees. Christmas and New Year work. Lettering.
Form II Senior Grade	Fall flowers, fruit on the branch, or vegetables with leaves. Trees in ink or in colour. Picture study. Colour washes. Hues of colour. Lettering of name on drawings.	Illustrative drawing, using trees and figures. Designs chiefly from nature, applied in Christmas and New Year work, such as booklets and calendars. Single line alphabet and its application.
Form III Junior Grade	Flowers, fruit on the branch, or vegetables. Trees and landscapes in colour or in ink tones. Complementary colours. Scales of three values.	Trees without foliage. Winter landscapes. Picture study. Calendars, etc. Lettering.
Form III Senior Grade	Flowers, fruit on the branch, or vegetables, trees, and landscapes, in pencil, colour, or ink values. Scales of five values in neutral tones or colour. Colour circle. Graying of colours.	Five balanced tones of grayed colour. Designs related to work for Christmas and the New Year. Booklets or calendars, etc. Lettering.

	September and October	November and December
Form IV Junior Grade	Details of plant structure in pencil outline. Flower or fruit, and landscape compositions in tones of grayed colour. Colour circle. Properties of colour. Colour schemes of low intensity.	Decorative panels or units made from drawings done in September and October, to be used in such problems of Applied Design as book covers, programme covers, portfolios, initial letters, etc. Lettering of mottoes, verses, or quotations.
Form IV Senior Grade	Drawings from flower or fruit sprays. Details of plant structure in pencil outline. Compositions from studies of flowers, fruits, or vegetables in suitable schemes of colour. Landscape compositions. Colour circle. Properties of colour—hue, value, and intensity. Analogous harmonies.	Decorative panels or units made from drawings done in September and October, to be used in such problems of Applied Design as magazine covers and pages, title-pages, tail-pieces, and book-plates. Lettering. Decorative initials.

	January, February, and March	April, May, and June
Form I Junior Grade	Illustrative drawing. Toys or other interesting objects. Borders, all-over patterns, and single units, to be used in the making of Valentines and Easter cards.	Illustrative drawing. Budding twigs and Spring flowers. Flower forms in simple designs.
Form I Senior Grade	Illustrative drawing. Winter trees and landscapes. Toys. Animal study. Picture study. Simple designs for Valentine and Easter cards.	Illustrative drawing. Budding twigs and Spring flowers. Flower forms in simple designs. Designs applied.
Form II Junior Grade	Illustrative drawing. Toys and other interesting objects. Animals and children. Trees and winter landscapes. Picture study. Valentine and Easter designs.	Illustrative drawing. Budding twigs and Spring flowers. Tints and shades of colour. Borders and all-over patterns.

	JANUARY, FEBRUARY, AND MARCH	APRIL, MAY, AND JUNE
Form II Senior Grade	Interesting objects on a level with the eye. Animals and children. Trees and winter landscapes. Picture study. Easter cards or Valentines. Colour washes. Hues of colour.	Silhouettes of children. Budding twigs and Spring flowers. Units of design derived from nature, repeated in borders and all-over patterns. Designs applied. Illustrative drawing.
Form III Junior Grade	Drawing from the figure and from animals. Illustrative drawing. Objects in common use, such as pottery, kitchen utensils, etc., above or below the eye level. Japanese lanterns. Picture study.	Flower sprays in colour or in ink tones, composed in suitable oblongs. Charts of flower forms in pencil outline. Borders and all-over patterns. Complementary colours. Graying of colours.
Form III Senior Grade	Drawing from the figure and from animals. Illustrative drawing. Objects in common use, such as pottery, kitchen utensils, etc., having handles. Japanese lanterns. Grouping. Picture study.	Flower or figure compositions. Spring landscapes. Insects. Charts of flower forms in pencil outline. Borders and all-over patterns.
Form IV Junior Grade	Drawing from the figure, and animals, birds, or insects. Illustrative drawing. Rectangular objects. Grouping of objects. Picture study.	Avenue of trees. Scales of intensity. Complementary harmonies. Single units, borders, and all-over patterns. Applied design.
Form IV Senior Grade	Drawing from the figure, to be finished as posters or used in illustrative drawing. Interesting rectangular objects (free-hand perspective). Grouping of objects. Picture study.	Window sketch or landscape composition. Single units, borders, and all-over patterns, using either abstract motives or motives derived from nature, planned for stencilling or block-printing.

COURSE FOR UNGRADED CLASSES

Freehand expression with charcoal, coloured chalk, black crayons, coloured crayons or water-colours, and pencils, in illustrative drawings and in the representation of natural forms and common objects and landscapes; the six standard colours, properties of colour, tints, shades, and hues of colour, matching of colours, complementary colours, graying of colours, neutral values; the appropriate decoration of constructed objects; lettering.

DETAILS OF THE COURSE

ILLUSTRATIVE DRAWING:

Games, sports, events, experiences. Illustrative Drawing should be correlated with other school subjects.

REPRESENTATION:

Plants, flowers, budding or leafy twigs, stalks with seed packs, and vegetables, in suitable mediums, paying attention in Form I, to direction of growth and position of masses; in Form II, to relative size and shape of masses; and in Forms III and IV, to foreshortening of parts and details of structure.

Forms II, III, and IV: Trees and simple landscapes.

Forms I and II: Toys and other interesting objects.

Forms II, III, and IV: Animals and children.

Forms III and IV: Objects in common use, such as pottery, kitchen utensils, etc., singly and in groups. Special attention should be paid to foreshortened circles at various heights, both when seen as ellipses and as parts of ellipses. Pencil measurements should be used in determining proportions, and handles should be carefully studied. Interesting rectangular objects, such as books, baskets, boxes, etc., in various positions. The study of foreshortening and convergence with the help of pencil measurements, and comparison of slants with the pencil held vertically or horizontally, level with the eye. It is not expected that vanishing points are to be used here.

NOTE.—The drawing from rectangular objects is optional in Form III.

COLOUR:

Form I: The six standard colours.

Form II: Tints, shades, and hues of colour, matching of colours.

Forms III and IV: Properties of colour, complementary colours, graying of colours, neutral values.

DESIGN:

Forms I and II: The making of units from natural, geometric, and other forms, and their repetition in borders and all-over patterns for the furnishings of dolls' houses and for the decoration of simple sewn or constructed objects, using one colour with black, white, or gray.

Forms III and IV: Bilateral units derived from nature or from geometry, repeated for borders, corners, and all-over patterns; the conventionalizing and squaring of natural forms; squares, oblongs, drop oblongs, circles, and semicircles, are to be used in constructive plans for the repetition of patterns. These designs are to be finished in two or three values of a grayed colour.

Forms I and II: Designs suited to Christmas or New Year problems in construction.

Forms III and IV: Calendars, book covers, etc.

LETTERING:

Plain capitals in single line adapted to the ability of the class and to the purpose for which the lettering is intended.

MEDIUMS:

Form I: Charcoal, coloured chalks, black and coloured crayons.

Form II: Charcoal, black and coloured crayons, soft lead-pencils, water-colours (optional).

Forms III and IV: Pencil, charcoal, brush and ink, water-colours.

COURSE OF STUDY ARRANGED ACCORDING TO SEASON

SEPTEMBER AND OCTOBER

Plants, fruits, vegetables
Trees and landscapes
Six standard colours; tints, shades, and hues of colour
Matching of colours
Properties of colour

NOVEMBER AND DECEMBER

Lettering
Designs related to Christmas and the New Year
Calendars, book covers, etc.

JANUARY, FEBRUARY, AND MARCH

Drawing from the figure, or drawing from animals
Toys, cylindrical objects, and rectangular objects.

APRIL, MAY, AND JUNE

Budding twigs, flowers, Spring landscapes
Insects
Border and all-over patterns
Complementary colours
Graying of colours.

NOTE.—Illustrative Drawing may be taken at any time that is most convenient.

ART

CHAPTER I

GENERAL INTRODUCTION

THREE SIDES TO ART EDUCATION

ART, EVEN in its relation to elementary education, is a subject so comprehensive that it is impossible to treat it exhaustively in a School Manual. The ways of teaching it are many, and the lessons outlined in the following pages are intended to be largely suggestive. But, though methods may vary with the individuality of the teacher, the underlying principles to be taught must be the same in all cases.

In order that the best results may be obtained from the teaching of this subject, its ethical, cultural, and industrial bearing on the pupil's education must be recognized.

Its ethical value depends, among other things, upon the truthfulness of expression required and the just discrimination between contending interests that many of the exercises demand. Not the least of the benefits that come to the pupil through the study of the subject is the vision that it gives him of the dignity of labour, in that the lowliest work well done may, through the workman's attitude toward it, come to rank as a veritable work of art.

Its cultural value is to be found in the refining influence that the study and the appreciation of the beautiful have upon the individual, especially when these are coupled with the effort to produce it.

The industrial side, however, must not be lost sight of, for although all the pupils who pass through the elementary schools do not join the ranks of the industrial army, all are made more capable and efficient by a training which develops the creative faculty and enables the eye and hand to work in unison with the brain. For the sake of the pupils who must make their living by their hands, the teacher with breadth of vision will study the industries of the neighbourhood and shape many of the school lessons to meet their needs.

THE COURSE OF STUDY

In the pages that follow, the Course of Study is expanded and interpreted under six heads, namely: Illustrative Drawing, Representation, Picture Study, Colour, Design, and Lettering. It is not to be understood that these divisions are

separate and distinct nor that they must necessarily be taken up in the order indicated. They have been arranged in this manner for greater convenience in handling, and in order that the subject may be more clearly apprehended.

A bare statement of what is to be taught is given in the Course of Study. This is amplified and made more definite in the Detailed Course which follows it. To any one who observes the manner in which the work for each Form is built on the knowledge and power that should have been gained in the preceding Forms, the Course, as set forth in the Manual, must commend itself as being simple and easily covered. Under ideal conditions the teacher cannot fail to find it so. At the same time it has been recognized that some schools are affected by conditions which seriously hamper art study, while other schools more fortunately situated have splendid facilities for this work. Accordingly, an effort has been made to frame the Course with sufficient elasticity to give scope to all. The teacher's aim in following it should be, not so much to cover all the work prescribed, as to teach all the principles through such exercises as are best fitted to the class and the environment. The principles should be so taught that the pupil will be in a position to apply them with intelligence in exercises that are entirely new to him, as well as in those with which he is already familiar.

HOW ENVIRONMENT MAY AFFECT THE COURSE

The lines followed in each particular school must depend largely upon environment. One school may be surrounded by fine old trees, another by gardens filled with an abundance of flowers suitable for study. In one locality vegetables or fruits may be easily procured. Near another school there may be an old house or a bridge that the finger of time has softened so that it takes its place as a natural and harmonious part of a landscape. Quaint old jars without decoration; antique vessels of iron, copper, or brass; or old-fashioned furniture of plain and simple form are to be obtained, possibly, in one neighbourhood; while pet animals or birds and interesting costumes for poses are to be had in another. The window sketch in the city may take the place of the landscape in the country; while in some localities the presence of a lake or river in the neighbourhood may not only invest landscape study with more than ordinary interest, but also afford opportunities for the sketching of boats. There are more ways than one of complying faithfully with the Course of Study. The good material that lies at hand must inspire and mark out the lines that may, with best results, be chosen.

ADVANTAGES OF USING DIFFERENT MEDIUMS

Variety adds interest, and it is well to bear in mind that learning to sketch anything in the proper way gives the power to sketch similar things, and learning to handle one medium helps in the handling of all mediums of kindred nature. Thus every step gained in one direction is a help in all.

As the pencil is the most convenient medium for ordinary use in any occupation, the ability to use it well is of great importance. It is, however, the most difficult medium to handle, and the other mediums, especially charcoal, should lead up to its use.

USE TO BE MADE OF THE MANUAL

The lessons from Form to Form in the Manual are planned to suit the growing powers of observation, appreciation, and expression in the pupils as they advance; but with the exception of the increasing difficulty of the problems given, the change of emphasis from one particular to another, and the difference in the language used for pupils of various ages, there is great similarity in the teaching of drawing in the different Forms. For this reason, the teacher of a Primary class may find, in a lesson intended for Forms III or IV, points that may be made use of in a Primary class, while the teacher of a Form IV class may make excellent use of ideas gleaned from Form I lessons.

It is not intended that the Manual should put the words in the teacher's mouth; rather it is intended that these lessons should offer one way of inculcating certain principles that must be taught, in order that each teacher may, after a similar manner, develop an individual style of teaching. It is just as desirable that the instructor's individuality in teaching should be cultivated as it is that the pupil's individuality of expression in the different mediums should be developed.

THE ILLUSTRATIONS

A number of the drawings in the Manual are reproductions, much reduced in size, of the actual work of pupils, and show what should be expected of a good average pupil in each Form. The remaining illustrations are intended to present good handling and different methods of using the mediums. Except in the case of alphabets, the illustrations are not intended to be copied. It is always an advantage to have good examples for reference, that pupils may learn how to handle things in a similar way, but copying tends to cripple effort.

USE AND CARE OF MATERIALS

A frequent cause of poor work is to be found in the improper use, and the lack of care, of materials.

The leaves in the blank drawing books are perforated so that one at a time may be detached. The practice of using leaves without removing them from the book, besides restricting expression, tends to destroy the edges of the unused sheets, and mars their freshness.

The owner's name should be lettered on each drawing in a uniform way.

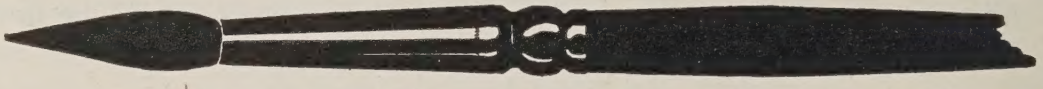
The drawings made by each pupil should be kept in a portfolio large enough to hold them and the blank drawing book. The owner's name should be on the outside of each portfolio. All portfolios should be collected at the end of the lesson and kept in a closed cupboard or in a covered box.

Time may be saved by adopting a systematic plan for the distribution and collection of materials. The things to be used by the pupils of each row should be placed on the front desk and passed back in an orderly way.

Paint-boxes should be cleaned at the end of the lesson, and each brush washed and brought to a point. Sometimes boxes and brushes are kept in the portfolios. When this is done the brushes should be put in with the handle end down. Each pupil should be provided with a shallow pan or a low, wide-mouthed bottle for water. A clean piece of old cotton cloth will be found preferable to blotting-paper for the use of the pupils in water-colour lessons.

At the close of the lesson all materials to be collected should be passed up to the front desks, to be put away by monitors.

Before the summer vacation, brushes should be put where moths cannot get at them.



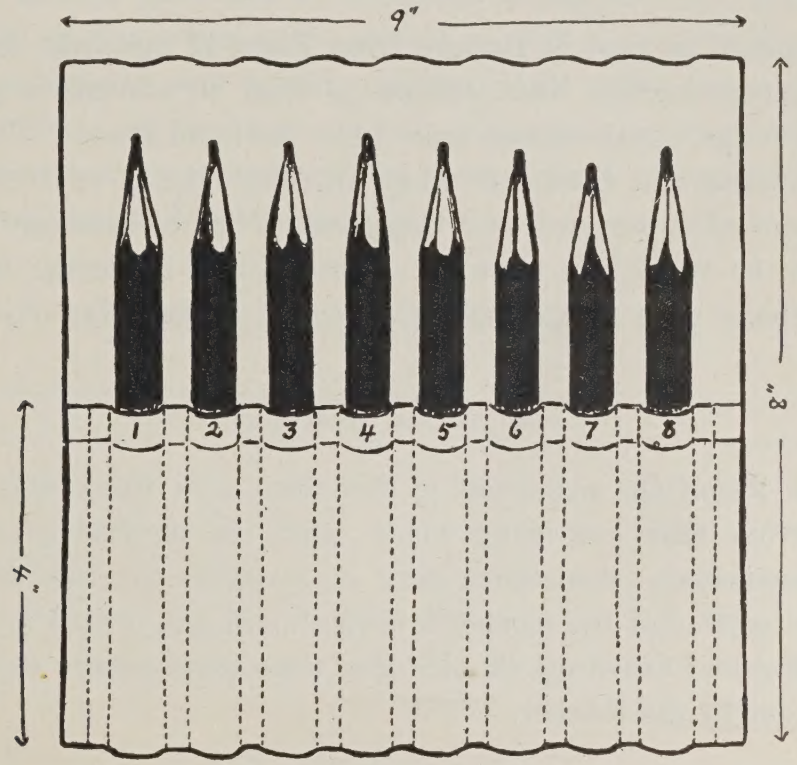
NO. 7 SIBERIAN FITCH, ACTUAL SIZE

The brush used should not be smaller than No. 7. It should be full and firm. and should come to a good point when moistened.

The best charcoal for school purposes is very inexpensive. It comes in boxes of fifty sticks, which may be broken in two, as from four to six inches is a convenient length for the pupils to handle. Charcoal should be held loosely under the hand about the middle of the stick or farther back. It should not be sharpened for general work.

The regular drawing pencil should be quite soft, not harder than B nor much softer than B B. The teacher should test a pencil before recommending it to the pupils. One firm stroke of a pencil that is too hard will not produce a mark sufficiently dark for accents; while instead of the smooth, gray line that is desirable in a sketch, too soft a pencil will produce one that is woolly in appearance and easily blurred.

Drawing pencils should be sharpened with a long slant of wood, and not more than a quarter of an inch of lead need be exposed. The lead should not be sharpened, but slightly rounded by rubbing it lightly on a piece of paper. The



PENCIL CASE

side of the point should produce the line in drawing. When the pencil is worn down so that the line becomes too broad, the point of the lead should be nipped off.

It will be found that greater freedom of expression is secured in sketching by holding the pencil far from the point and under the hand, so that all the tips of the fingers touch it lightly. Care should be taken that a pupil receives the same pencil each time one is used. A pencil case for each row will be found convenient. These cases may be made of pieces of felt or heavy cloth nine inches by

twelve inches in size. Four inches of the length should be turned up, divided into as many pockets as there are pupils in a row, and stitched on the divisions. If a piece of white tape is basted along the upper edge of the fold before the pockets are stitched up, the compartments may be numbered on it in ink.

If there are so few pupils in a row that the pockets prove too wide to hold the pencil securely, this defect may be overcome by an extra row of stitching at one end of each division. A quarter of a yard of felt will make six cases, as this material is two yards wide. The pencils should be put in the cases with points up, so that it may be seen at a glance whether or not they are in proper condition for the next lesson.

The ruler should be used in Design, from Form II upwards, for measurements and for drawing construction lines, excepting when an exercise is given to test the pupil's power to judge distances and draw light freehand lines. With the exception of occasional construction lines, all other drawing should be freehand. A ruled line has a mechanical appearance and is noticeably out of harmony with the curved lines that cannot be ruled in a drawing. Good pencil rendering demands that all the lines be freehand even in the representation of rectangular objects.

CRITICISM OF WORK

During the lesson the attention of the class as a whole should be called to the common errors that are being made, and the method of correcting these should be demonstrated. Assistance may be given to the individual pupil when it is deemed advisable, but the teacher's work should not form a part of the pupil's drawing. All finished drawings should have their good points approved and their defects pointed out by the teacher.

HELPS

Many beautiful illustrations are to be found in magazines and periodicals. The pupils should be encouraged to make collections of helpful reference materials of all kinds. These may be arranged according to subject or medium in a large loose-leaf scrap-book or in folios, to be brought out by the teacher as occasion requires.

A bulletin board at least five feet long by two feet high will be found very convenient for the display of good drawings and reference materials of different kinds for study. The board should be covered with burlap or some similar material

of a subdued tone calculated to harmonize with the surroundings and with any samples that may be pinned upon it. A bulletin board should be so placed that anything exhibited upon it will be only slightly above the eye of the average pupil.

Occasional public exhibitions of pupils' drawings, when well mounted and tastefully arranged, have an educational force and assist in arousing general interest. They are also an incentive to the pupils to make greater effort. These exhibitions may be held at school closings or at local Autumn Fairs.

The beneficial effect of beautiful surroundings on the growing child can hardly be estimated. Teachers should use what influence they have in seeing that the school-house and garden are made as beautiful as possible and kept in good condition. The walls of the school-room should be soft in colour, the depth of tone depending on the amount and quality of light the room receives. A few good pictures or plaster casts representing subjects of interest to the pupils will exercise a constant influence on the occupants of the room and are more desirable than many pictures or ornaments of indifferent quality.

ILLUSTRATIVE DRAWING

Long before the child can express himself through writing, he can tell stories by means of pictures. Given a pencil and a piece of paper, a three-year-old child will make a series of marks which, unintelligible as they may seem to the observer, are full of meaning to himself. It is not necessary to teach him to express himself in this way, he does it naturally; but at first his pictures are symbols significant only to himself. It is the province of the teacher to help him to express himself more clearly, not by imposing ready-made ideas upon him, but by helping him to get clearer mental images and encouraging him to advance from symbols to pictures that really look like the thing he wishes to represent.

In Form I classes the Illustrative Drawing should be spontaneous, the aim being to get the pupil to express himself with perfect freedom. In each succeeding Form greater accuracy should be expected, but accuracy must not take the place of vivid life and action.

In taking up Illustrative Drawing the teacher should look first for life and action, next for better form, then for proportion and composition, finally, for perspective. Not until Form IV need these drawings be criticised for perspective, although very young pupils may be taught to observe differences in appearance due to change of position or to distance and they often represent them surprisingly well.

The study of good pictures may be of great assistance to the pupil in expressing his thoughts, if he is made to realize that the artist in his picture is trying to tell us a story in the simplest and most beautiful way possible to him.

No hard and fast rule can be given as to what mediums to use in Illustrative Drawing. Charcoal, being the most responsive, is undoubtedly the best medium with which to begin this work in any Form. It is desirable, however, to aim at having the pupils' most finished illustrations done in black or coloured crayons in Form I; in brush and ink or water-colours in Forms II and III; and in flat washes of water-colour over pencil in Form IV.

In Form I classes illustrative and imaginative drawing should be used constantly, not necessarily in the drawing period, but in connection with everything the pupil is taught. It is a means by which he impresses the knowledge he is gaining every day through his language, reading, and number lessons and is also an evidence as to whether his concepts have been correct or otherwise.

Later on in the pupil's school life, as his power over language develops, Illustrative Drawing becomes less and less a necessary means of self-expression; but it never ceases to be to him a valuable mental training, because it tends to crystallize his thoughts into definite and systematic shape, and therefore should not be neglected at any period of his school life.

REPRESENTATION

The term Representation, as it is used here, is to be understood as meaning the delineation of things as they appear to the eye. The delineation may be in mass, in outline, in values, or in light and shade. Black, neutral tones, or colours may be the means by which it is expressed, and the mediums through which this expression is made possible are charcoal, chalk, crayons, ink, water-colours, and pencil. Other mediums that might be used are, for various reasons, not suitable for school purposes.

In this Manual the drawing and painting of the following things are handled under the head of Representation: plant specimens, fruit and vegetables, trees, landscapes, animals, children, and manufactured objects. In the delineation of these things, vigilant attention must be paid to Composition which, on that account, is explained in connection with Representation, although its application is by no means confined to this division of the subject.

The success of every lesson in Representation depends on the previous preparation made by the teacher and pupils and on the sincerity of the work done in the class. Careful study is necessary, and pupils must be taught, as they work, to observe, draw, and compare again and again, looking for the large truths first and adding only enough detail to make their representation of the object true to its appearance.

PLANT SPECIMENS

The first requisite for good plant drawing is a sufficient supply of good specimens. If these are picked the evening before they are to be used and kept overnight in deep water, they will then remain fresh throughout the lesson. Wilted sprays make poor studies and are most uninspiring. At first, the wise teacher gathers his own supply or arranges to have some pupils upon whom he can depend do it for him. Later, the whole class may bring specimens, and a selection may be made from these. By this method the judgment of the class will be trained. As a rule, one good specimen on each alternate desk is quite sufficient. Where the flower is large, as the iris or the tulip, eight or ten will be enough for an ordinary school-room, if they are arranged in an upright position on model stands or in jars of moist sand on boards placed across the aisles so that each pupil has a good view of one. Two should be placed somewhere in front, one at either side, for those who sit in the first row of seats. In the case of specimens which would not grow in an upright position naturally, such as certain fruit sprays and vines, another method of placing must be used. Pieces of heavy cardboard, nine inches by twelve inches, or larger, may be covered with cheesecloth and placed leaning against the jars of sand on the boards across the aisles. The specimens may be pinned in a natural position to these sheets of covered cardboard. When grasses, sedges, or sprays of small flowers are to be drawn, a specimen may be laid on each pupil's desk on a sheet of drawing paper of the same size as that on which the drawing is to be made. This method is particularly satisfactory in Form I, as the pupil can glance readily from his drawing to the specimen to see that he is making it occupy the same space on his sheet of paper that it does on the similar sheet on which it lies, and by so doing overcome the natural tendency in beginners to make their drawings too small.

Where gardening is a feature of the school work, the teacher should have those plants cultivated which are suitable for representation and should also plan to have a succession of plants in bloom. The garden can supply crocus, scilla,

hyacinth, daffodil, tulip, iris, orange lily, polyanthus, primrose, bleeding-heart, poppy, phlox, nasturtium, spiderwort, salvia, aster, sunflower, petunia, coxcomb, cosmos, ageratum, and the old-fashioned marigold, all of which make excellent studies. From early Spring to late Fall the woods, roadsides, and vacant lots are overrun with a wealth of suitable material—pussy willows and other catkins, spring beauties, hepaticas, anemones, dog-tooth violets, marsh marigolds, trilliums, clover, dandelions, meadow phlox, wild mustard, buttercups, thistles, wild mints, mulleins, teasel, harebells, pink yarrow, musk roses, toad-flax, golden-rod, wild asters, many varieties of grasses, sedges, and weeds, and a host of other flowers.

FRUITS AND VEGETABLES

A single specimen of fruit without stem and leaves is not, as a rule, a desirable subject for drawing; but fruits or vegetables may be studied and drawn in this way in the upper Forms, when this study is preparatory to a more finished drawing in which the specimen is to be shown with its natural complement of stem and leaves, or in a composition made up of two or three of its kind grouped with some appropriate utensil.

Among the fruits that make good studies when they are left on the twig or small branch, are cherries, currants, plums, peaches, pears, apples, and wild or uncultivated grapes. Other interesting studies are a head of corn with the husk parted so that some of the kernels are exposed to view, small or medium-sized tomatoes attached to a portion of the vine, and squashes or similar vegetables to the stalk of which a leaf or two still adheres.

TREES

Trees must be observed out-of-doors and drawn afterwards from memory. At first, they should be studied and drawn alone; later, the height in relation to the horizon should be noted, that they may be used in landscape composition. The trees selected for study should be true to type and common to the neighbourhood.

LANDSCAPES

The first landscapes drawn by young pupils must necessarily be made up with the teacher's help. Form I pupils learn to observe the appearance of earth, trees, and sky in a landscape through their drawings. Later, the process is reversed and,

in the succeeding Forms, the pupils endeavour to represent what they observe in nature.

ANIMALS

Animals and birds may be studied out of school and drawn from memory afterwards, but better results follow careful study by the class under the direction of the teacher. A pet animal, such as a dog, cat, rabbit, white rat, or squirrel; or a pet bird, such as a canary, parrot, pigeon, or bantam rooster, may be brought by the owner after school is called and posed on a table in front of the class. It is better to have only one model at a time, that the attention may be concentrated and that there may be no confusion. A cow, a pony, or a goat may be tethered in the school yard, while the pupils sit on the steps of the school with a sheet of paper fastened by rubber bands to some large book and make rapid charcoal sketches. After an exercise of this kind, each pupil should make, from memory, a drawing of the animal in some one of the positions in which the class has observed it.

CHILDREN

Figure drawing or drawing from the pose is practically begun in the illustrative work in Form I, but not before Form II should any attempt be made to separate the figure from the story, to draw it by itself.

Care should be taken in the choice of a model. A well-shaped child whose clothing is made on simple lines is the best model. In no case should the abnormal be chosen.

The model should be placed on a bench or table in a corner of the room at the front, so that each member of the class will have a similar view; or two may be placed, one at each side, at the front. As far as possible, a different pupil should be selected for each pose, and no pupil should be allowed to pose more than five minutes at a time (seldom that long) unless in a sitting posture.

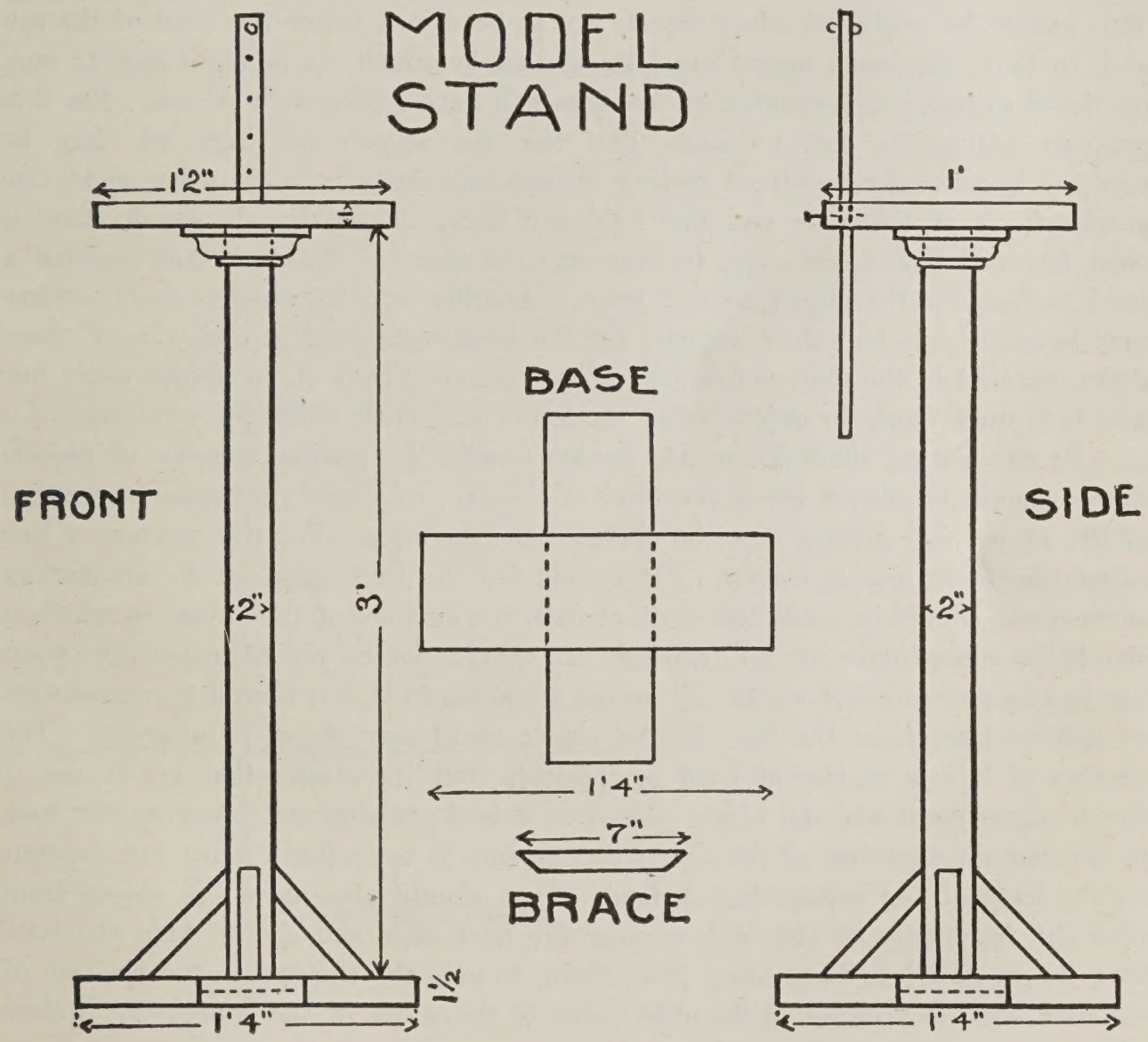
MANUFACTURED OBJECTS

Object drawing cannot be made either interesting or profitable without a sufficient number of suitable objects that appeal to children. Fortunately it is not difficult to get things that do interest them. Little brown tea-pots, jugs, tea-kettles, jars, coffee-pots, saucepans, and other pieces of kitchenware, are hailed with the joy with which one meets old friends in new places. Just as welcome to

SUGGESTION IN GROUPING

the school-room are gardening tools and utensils, and most welcome of all perhaps to the younger pupils, are favourites from toyland.

Objects that have lost their original usefulness may be brought to the school by the pupils. A cracked tea-pot or leaky saucepan, that would otherwise come to an inglorious end in the garbage can, may be rescued from its fate to form with berry-baskets, lunch boxes, small suit-cases, and other articles already mentioned, an interesting collection that may be kept in some unused cupboard or store-room of the school ready for drawing lessons.



When money is supplied for the purchase of drawing models, it is unwise to spend it all on Art pottery. A visit to an ordinary shop where such things as utensils and toys are kept will often result in a collection of good models for a small outlay.

Whatever is selected should be chosen for its beauty of form or colour and should have little or no decoration. Simple, useful objects are best. That which is fantastic is rarely beautiful.

A single large object will suffice for a lesson if it can be so placed that every member of the class will have an interesting, natural, and unobstructed view of it. This cannot be contrived when objects are to be drawn below the level of the eye and, in that case, some means must be devised by which six or eight objects may be placed so that every member of the class will have a good view of one. For this purpose adjustable model stands like the one shown on page 29 may be used, or boards may be placed resting on opposite desks in every other aisle, one at the front of the aisle and one half-way back. These boards should have a cleat fastened under one edge, to overcome the slant of the desks and provide a level surface for the object to rest upon. Another way in which a level surface may be secured is to have a support for the boards fastened at each side of these desks, parallel to the floor and at the proper distance from it, to permit every one who is to draw from the object to see the top of it slightly below his eye level.

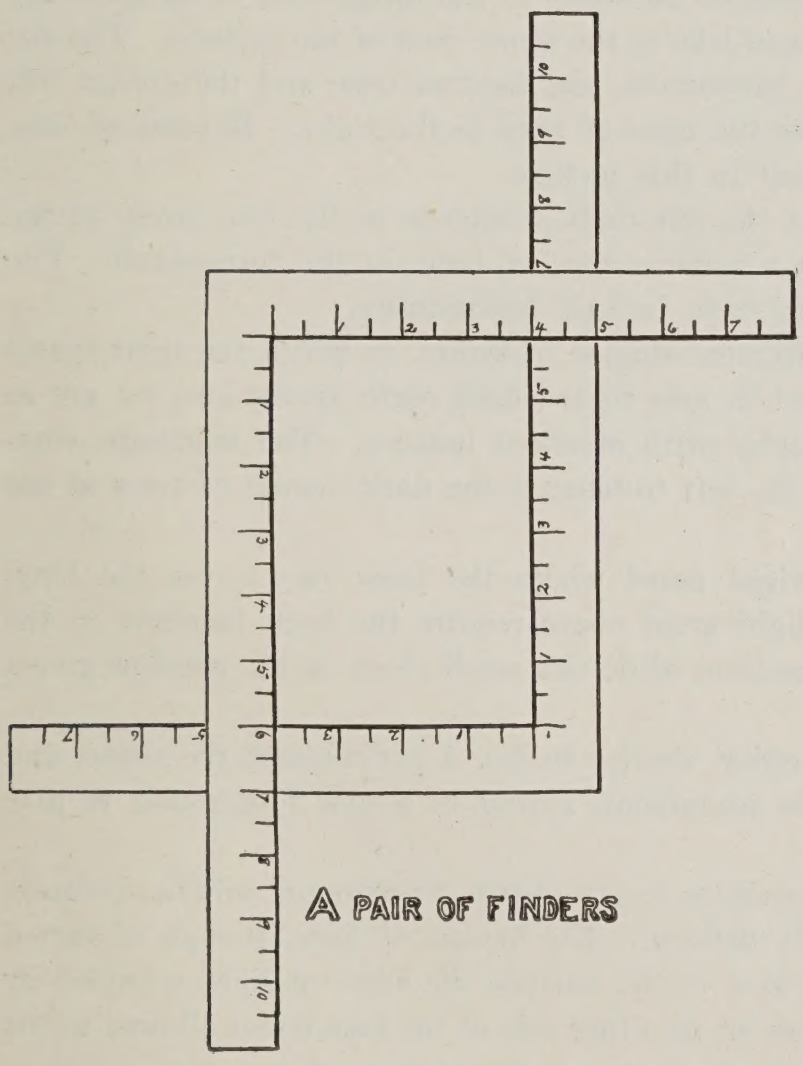
In the Forms above Form II, Senior Grade, the greater number of objects drawn should be placed below the level of the eye, in which case some suggestion of the supporting surface must be made in the drawing. For this purpose a line called the *table line* is drawn. It stands for the back edge of the supporting surface and should be made less distinct than the outlines of the object, to which it should be subordinate in the drawing. It should not be placed above the object nor in any position that would call undue attention to it, but should be represented as farther back than the base of the object or of any object in a group. The placing of it is a matter of good composition, but the classes that are to use it should experiment with an object placed on a book, raising and lowering the book to see that the back line of the supporting surface is not a fixed thing, but depends on the level of the supporting surface. They should also move the object from near the front edge of the book to near the back edge and should turn the book with its greatest length receding from them, to note the changes in the position of the back edge in relation to the object, due to the width of the supporting surface and to the position of the object on it.

COMPOSITION

Composition in Art deals with the choice and arrangement of things to be drawn, the selection of the size and proportion of the paper to be used, and the placing of the drawing so that it will occupy suitably the space chosen. The results achieved should be pleasing and should exhibit thoughtful consideration for variety in the division of spaces.

Composition is fundamental in the development of good taste and raises what otherwise would be a mere statement of the appearance of things to the plane where individual creative power has sway and aesthetic judgment is trained.

USE OF FINDER



A PAIR OF FINDERS

The selection of the shape and size of the drawing may be determined by using a finder, which can be made of cardboard or heavy paper in two pieces, as shown in the accompanying illustrations. The inner long edges of the finder should be about ten inches and carefully marked in inches and half-inches beginning at the angle, which should be a perfect right angle. The divisions will serve as guides for equal lengths on opposite sides of the "picture" which is seen framed by the finder.

If the sketch is to be made from nature, it will be necessary to determine what part of the view will make the most satisfactory picture and what proportions in a rectangle will best inclose it. The

accompanying illustrations will show how, in a single view, a number of different pictures, each a well-balanced composition, may be found. Four of these, it will be seen, are animal subjects, and four are simple landscapes, each a study in itself.

No. 1, a hillside pasture with four sheep, shows the two white sheep at the left balanced in the composition by the two black ones at the right; they are at different levels and of different sizes, and their heads are not in the same position.

In No. 2, the two dark masses of black sheep at the left are balanced by the masses of the trees at the right. The line of the pasture does not cut the picture exactly in half; its downward slope to the left is opposed by the downward slant to the right of the wooded distance.

In No. 3, there is a panel in which the main lines of the landscape give areas of different shapes, the light masses of the sheep in the foreground being necessary to balance the light areas of sky and lake in the upper part of the picture. The sky and earth spaces are in pleasing proportion, and the two trees and the distant hill at the left beyond the lake oppose the mass of trees to the right. Rhythm of line, mass, and value are very apparent in this picture.

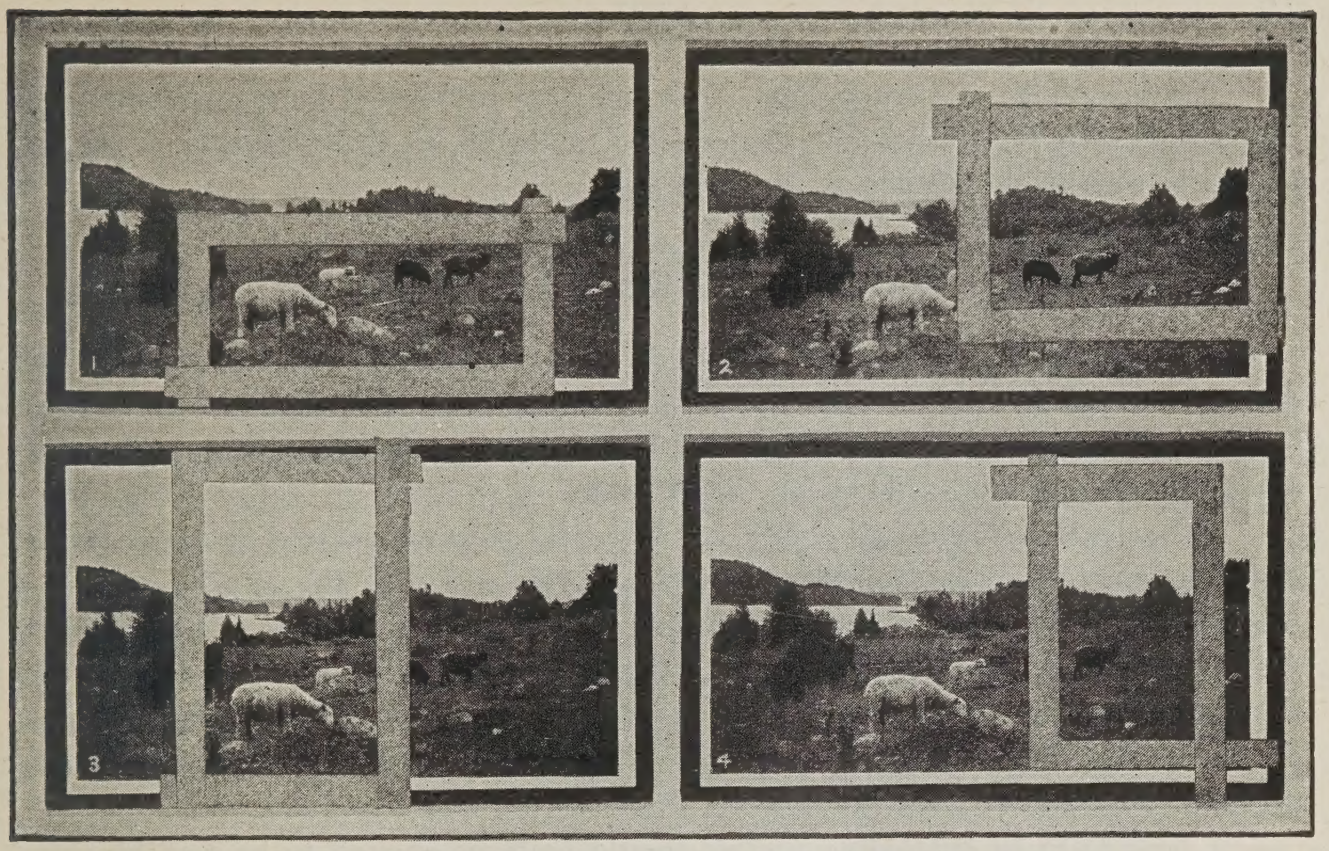
In No. 4, the dark sheep at the left finds a balance in the tree group at the right, while the bright sky has a balance spot of light in the foreground. The ground lines do not cut the landscape in half horizontally.

In No. 5, there is quite a different-shaped inclosure, in which the light spaces of sky and water are about equal in area to the dark earth spaces and yet are so shaped that there is variety coupled with excellent balance. The landscape composition needs the two trees at the left to balance the dark masses of trees at the right.

In No. 6, there is an upright panel where the trees rise across the long, horizontal water-line, and the light areas above require the light boulders in the foreground to balance the composition, while two small sheep in the meadow give a little life.

In No. 7, the shape is somewhat similar to No. 3 but without the sheep, and the two small fir trees are made prominent, aiding in a new foreground to give distance in the composition.

In No. 8, the three great requisites to give depth, foreground, middle distance, and background, are very clearly defined. The masses of dark, though of varied shapes, balance each other and, as a whole, balance the areas of light occupied by lake and sky. The long shore-line on the other side of the lake is not allowed to cut the oblong exactly in half.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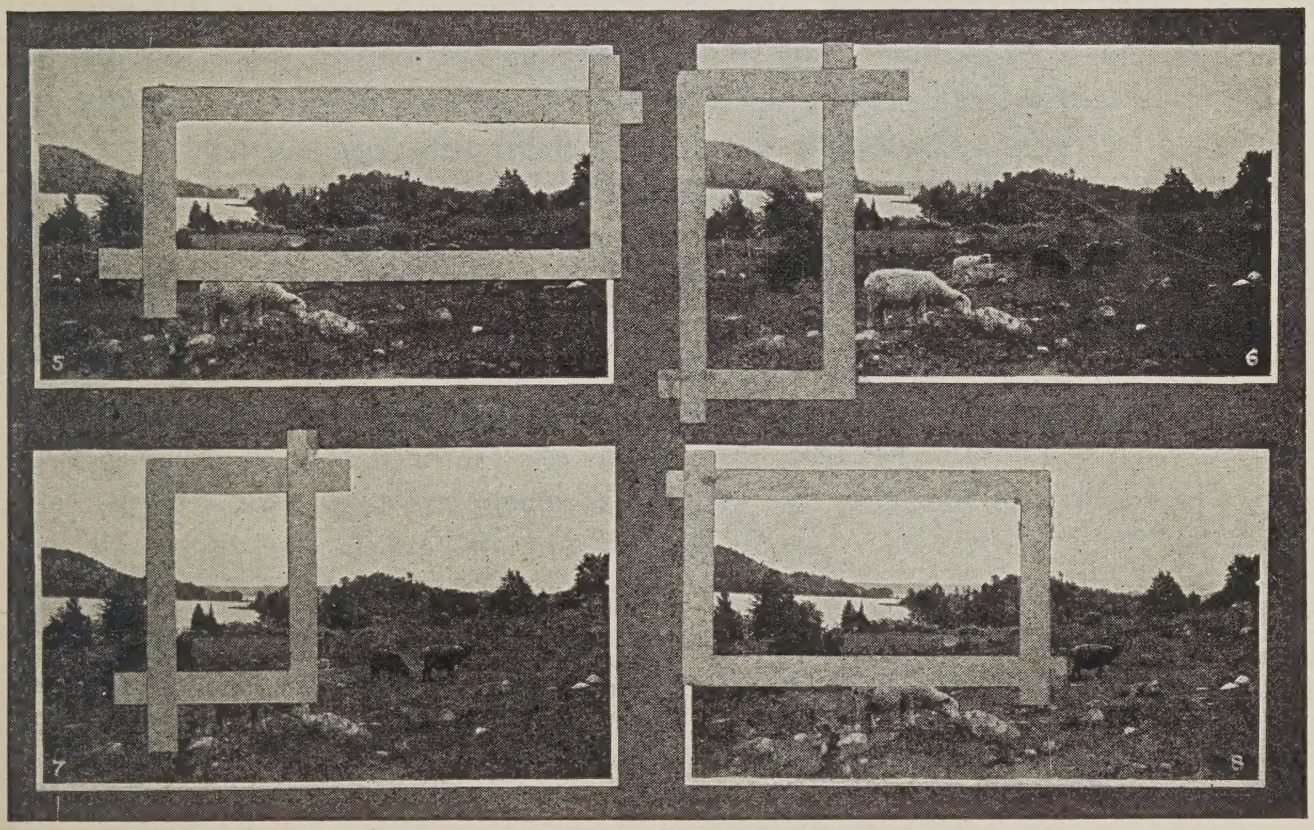
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The principles of Composition, although here illustrated more particularly in connection with Representation, are equally applicable to Illustration and Design, as will be seen in the lessons on these subjects.

PICTURE STUDY

A suggestive list of pictures for study in the different Forms is given in the detailed Course of Study. The teacher may choose two, or possibly more, pictures for study during the year, from this list, or may substitute others of equal excellence that are as suitable for the purpose.

The attentive consideration of a few beautiful pictures painted by artists whose claim to greatness is acknowledged by the world, will give the pupil a taste for what is best in Art and will also aid him in giving expression to his own ideas. Apart from this, it will be found that the concentration of the attention on the thought expressed by the artist in his picture and on the form in which he has expressed it, will have an elevating effect on the mind similar to that experienced through the study of good literature.

A picture to be studied by a class should be large enough to be seen by every pupil. Where it is not possible to obtain one sufficiently large for this purpose, three or four medium-sized prints of the same picture may be placed around the room so that each pupil may have a good view of one; or one may be fastened up, a day or two before the lesson, where every pupil will have an opportunity for studying it some time during the day, and each member of the class should be encouraged to discover all that can be found out about this picture by close observation. A print that is smaller than seven by ten inches is not of much use for this purpose.

A picture that has been studied should be left up afterwards for a few days, in order that the pupils may enjoy it through the light that the lesson has brought to bear upon it and also that their impressions concerning it may be deepened.

The method of teaching this subject, as demonstrated in the Manual, concentrates the attention on a single picture and the artist who painted it. A different method, by which several pictures that deal with the same subject are studied together without being in any way connected with the artists who painted them, may be taken occasionally. This method is particularly adapted for use with young pupils, who may be encouraged to bring pictures of children for study at one time and pictures of animals at another.

Pictures representing a season, such as Spring or Autumn, or some particular time of the day, as Evening, may be studied in Forms III and IV in connection with landscape composition. The study of pictures that are applicable to any of the drawing lessons that are being taken at the time will stimulate the observation of the pupils and strengthen their powers of expression.

COLOUR

During recent years many theories concerning colour have been advanced. Some of these theories have established principles which can be incorporated advantageously into the system used in teaching colour to children. Others, which establish standards of undeniable value in the industrial world, are of too elaborate a character for elementary school purposes, or are possessed of features that render their use inexpedient in such schools. In dealing with children simple materials and processes must be used if logical development is to be achieved.

Again, it must be remembered that it is not the scientific but the practical side of colour with which we are concerned, and whether the three colours, red, yellow, and blue are, or are not, the three primary colours of the spectrum need not trouble us so long as we are able to produce with these three colours all the variations of colour that are required in our school art work; and no other colour elements in pigments have been found that produce satisfactory results.

The Course in Colour has been prepared in accordance with the principle that education along any line should proceed as far as possible from the known to the unknown. Throughout the Manual the pupil's mental development has been kept in view as of first importance.

The aim in the colour lessons is to cultivate the power to observe, appreciate, and express colour and colour harmonies; also to develop an appreciation of harmony in the relationship of things, and the desire and ability to bring about such harmony.

The Course covers the study of Colour in itself, the methods of applying it, and the study and use of Colour Harmonies.

In Form I, Junior Grade, it is sufficient to expect the recognition of colours as belonging to the red, orange, yellow, green, blue, or violet families and their classification accordingly; and it is recommended that the pupils in this Form be given a comparatively wide range of colours from which to select what they require for their work in Representation.

In the succeeding Forms, the pupils learn to modify one colour with another, and in Form II, Senior Grade, and Forms III and IV they should be restricted to the use of the three colours, red, yellow, and blue in their water-colour work from nature and should be required to make from these all the colours they need. The colour-box should also contain black for use in Design and in the making of neutral values. The following water-colours are recommended: for the red cake, crimson lake, or alizarine; for the blue, ultramarine; for the yellow, gamboge; for the black, charcoal gray. A number of satisfactory three-colour boxes are on the market, supplied with cakes of colour which produce similar results although they are called by different names. The teacher should test the paints in a colour-box before recommending it to his class.

It will be found that the work done with a three-colour box is less hard and crude than that which results from the use of a six-colour box; and even when pupils are not able to produce the exact colour that they require, the effort to do so teaches them to analyse and compare colours and develops a habit of thoughtful work which is most desirable. When pupils who have been thoroughly trained in the use of a three-colour box in the elementary schools reach the high schools, the range of colours permitted them may be enlarged.

Colour is considered in the Manual through its three properties—Hue, Value, and Intensity.

In describing a colour, we may speak of it as red or blue, or blue-green or violet, etc., and this property by which we distinguish one colour from another is called *hue*.

We may say also that a colour is light or dark, and this property by which we measure the distance of a colour from white or black is called its *value*.

The third property, *intensity*, is under consideration when we speak of a colour as bright or dull. If we can imagine a colour gradually losing all its hue without becoming lighter or darker, until nothing remains but a gray tone, we imagine it as passing from full brilliance to neutrality; and if we represented the stages through which it would pass, we would be scaling it from full intensity to no intensity. This third property is sometimes called Chroma. Elementary School pupils are expected to make scales of hue, value, and intensity. Time spent in working over and over at these scales to produce accurate results would not be profitably spent, as their chief efficacy lies in the fact that the conscientious effort to make a scale gives the pupil the power to analyse a given colour and tell what must be done to produce it. It also helps him to discover where he has made

mistakes in trying to match colours and what must be done to correct such mistakes.

It is through the study of these properties of colour that the pupil is led to understand what is meant by colour harmonies and to endeavour to produce them in the different colour schemes he chooses for use in Design.

DESIGN

Design in the broad sense of the term may be said to be the expression of a thought or plan by drawing or in some tangible material. We may have Pictorial Design, which is involved in Representation and Illustration; Constructive Design, which deals with the form and proportion of things, such as furniture, machinery, and buildings of all kinds, as well as with the simple problems carried out in the Manual Training classes; and Decorative Design, which has for its ultimate aim the enriching of things made for some purpose apart from the decoration. It is with Decorative Design that we are chiefly concerned here, although it must be understood that the same laws govern all good design whether pictorial, constructive, or decorative.

From the standpoint of decoration or ornament, we may think of Design as the orderly arrangement of lines or shapes and spaces, expressed in neutral tones or in colour. It should have for its highest intention the effort to produce beauty. It is only through obedience to the laws that produce order that we may hope to achieve beauty. There are many different principles which must be observed to bring about beauty in ornament; for example, unity, variety, contrast, repose, subordination, restraint. It will be found that these are included under the three great laws of Balance, Rhythm, and Harmony.

Balance may be said to be produced in a design when no part of it attracts undue attention to itself on account of its size, shape, position, or colour.

Rhythm may be said to be produced when all the parts of a design are so related to each other that the eye is led smoothly and agreeably from one part to another throughout the design.

Harmony means visible unity, or accord. Only those things which have something in common may be said to harmonize. To exhibit harmony, a design must be fitted to the purpose for which it is intended.

AIM OF THE COURSE

The Course in Design in the Manual has been prepared with the intention of cultivating the judgment of the pupil and putting him in possession of knowledge that will enable him to appreciate what is good and lead him to demand it when the time comes for him to exercise choice. It is in this way rather than through the preparing of professional designers that the School Course should affect the industrial world, although the exercises in Design will no doubt be the means of influencing those best fitted for the work to take it up later, professionally.

The Course in Design is so arranged that the attention of a Form I class is directed almost altogether to the repetition of a line or shape at regular intervals. This is made possible by the folding and creasing of the paper. Only in work for special purposes, and after some experience, should a Form I class be required to use a ruler for measurements.

Provision is made for a wider choice in Form II classes, and the help given by the teacher should be less direct and more suggestive. The side or top view of a flower may be simplified as much as possible and repeated to form a border or an all-over pattern. Geometric and other shapes may also be used. In Form II, Junior Grade, inch measurements should be used to prepare a plan to ensure regularity of repetition, and in Form II, Senior Grade, measurements in both inches and half-inches are required. In Form II, a feeling for balance is cultivated, through the determining of the size of unit best fitted to occupy the space prepared for it.

In Form III, Junior Grade, two constructive plans new to the pupil are added, and increasing attention is paid to the unit of Design. The idea of Rhythm, as it may be exhibited in the relation of a number of spaces to each other, is developed, and ways in which the knowledge gained in the lessons in Design may be made use of out of school are brought to the pupil's notice. In Form III, Senior Grade, the same type of unit is used, after it has been simplified, refined, and if necessary, reconstructed so that it may be used with good effect alone, or in a border or an all-over pattern. The pupils in this Form are also expected to be able to modify a unit so that it will fit any given one of the constructive plans that are to be used in Form III. The consideration of the rhythmic relation of spaces is continued, and problems in Design that interest the pupil through home or person are discussed in this Form and studied more fully in the succeeding Forms. In Form IV, a clearer understanding of Balance, Rhythm, and Harmony is established. In

the Junior Grade, the pupil is expected to make intelligent use of these principles in constructing a unit from two or more abstract shapes; while the pupil in the Senior Grade must bring the same principles to bear on the problem of breaking up a given area into shapes that will be so related to each other as to make a pleasing and consistent unit of Design.

The above interpretation of the Course in Design is given to show the teacher how the work of each succeeding Form grows out of, and is a step in advance of, the work arranged for the Form immediately below it. There is no reason why a class should not occasionally use, for special purposes, types of Design learned in previous Forms when these seem to be particularly well suited to the purpose in hand.

The use of squared paper, though not necessary to the planning of designs, is of great assistance in some problems; and it is suggested that a supply of inexpensive paper marked in quarter-inch squares be kept for use, especially in the upper Forms.

For use in Design an H B pencil sharpened to a fine point is preferable to the regular drawing pencil.

Design develops the creative faculty, but in the elementary school the development of creative power should be brought about by modifying and adapting natural or other forms which may be so treated by each pupil that the result is the outcome of his own individuality.

A generous quantity of illustrative material should be kept on hand. It may consist of borders, surface patterns, book covers, title-pages, and other designs procured from magazines, drawing books, or other sources, such as historic ornament. The work of some of the pupils in a class may be sufficiently well done to be preserved for the help or inspiration of the other members. Among discarded samples of manufactured materials of different kinds, the teacher may be able to find some that are good in taste and sufficiently simple to be of use in the lessons in Design.

There are many more possible types and arrangements than those suggested in the Manual which would not be too difficult for elementary school pupils; but limitations are necessary, not only on account of the meagre amount of time that may be given up to the subject, but also that all fanciful, meaningless decorations may be avoided, and that the exercises chosen may be those which will best develop an understanding of the principles which underlie all good Design.

At the first, too great insistence on accuracy would be fatal to the development of power in Representation and Illustration, but in Design it is of the greatest

importance and, when once a unit has been chosen and the manner and method of repetition determined upon, the greatest possible accuracy of which the pupils are capable should be required of them. On this account the use of very intricate patterns and those which necessitate manifold repetitions of a difficult unit should be discouraged.

When there are two or more classes in a room, designs which have been begun in class may be finished as seat exercises. In any Form, the completing of unfinished designs will be found to make ideal seat work, profitable from both teacher's and pupil's standpoint, and of absorbing interest to the average child.

APPLIED DESIGN

The greater part of the work in Design done in the elementary school should be planned from the first with a view to the ultimate purpose for which it is intended and, wherever it is possible, the designs should be actually applied to the articles for which they were planned. In this way interest in the subject is greatly increased, and the definiteness given to each problem is conducive to thoughtful work and to a more intelligent understanding of the purpose of Design.

OPTIONAL PROBLEMS

A number of optional problems are suggested, which call for materials not generally found in schools. The pride of ownership that the pupil feels in something made by his own hands and the decoration of which has been planned by his own brains, is intensified when the article made is not only serviceable but also sufficiently durable to retain its usefulness and charm for years, or possibly with proper care, for a lifetime.

In no case are expensive materials required, and suitable remnants that the owners would be glad to have used in school in the ways suggested are probably to be found in many of the pupils' homes. So fascinated are the boys and girls with this work that the teacher will be surprised at their timely suggestions with regard to materials that may be substituted for those that are not to be obtained in the neighbourhood. Butter paper (not waxed paper) makes a good substitute for transparent tracing paper, and a sheet of foolscap to one side of which a coating of stove polish has been applied may be used instead of carbon paper. Strawboard, or pasteboard, though not quite so solid as mill-board, may be used in its place for some things.

When an article is to be constructed and decorated, the teacher should make one before the class undertakes it, not only that an example may be on hand for reference, but that difficulties may be anticipated and mistakes prevented.

HOME PROBLEMS

The planning of designs in school for home problems in which the pupils are interested will help them to realize that ornament must be thought of from the standpoint of the thing to be adorned and will awaken in them a distaste for the commonplace embroidery patterns and other cheap designs which come in packets for indiscriminate use on all sorts of materials. In many cases it will doubtless arouse a talent that might otherwise lie dormant.

Good taste forbids the use of ornament in connection with some things, and over-decoration is always to be avoided; therefore the points to be decided in a problem in Applied Design before the actual work begins, are as follows:

1. Does the article or surface to be decorated admit of decoration?
2. Will it be improved by decoration?
3. What form of decoration will most enhance its appearance—border, corners, all-over pattern, or single central unit?
4. What proportion of the surface should be occupied by the ornament?

In Forms I, II, and probably III, all of these questions should be decided by the class under the guidance of the teacher. In Form IV, the third and fourth points, as a rule, may be settled by the pupils individually.

LETTERING

It is of more importance that the pupil in the elementary schools should learn to letter one simple alphabet well and acquire the power to adjust the spaces between the letters in such a way that a consistent uniformity is apparent, than that he should have a superficial knowledge of many alphabets without a feeling for that consistent relation of one letter or group of letters to another which makes lettering for any particular purpose a problem in Design.

As soon as the pupil has gained sufficient control of the pencil, he should letter his name and the date on each drawing when it is done. From the very first, he should make the effort to keep his letters upright, of the same height, and grouped in words, so as to be readily discerned.

The alphabet which is used by the class should be kept on the black-board, so that it can be referred to at any time. If a piece of unglazed chalk be soaked in mucilage till it is saturated and then used, while it is still damp, for drawing the alphabet on the black-board, the letters when dry will not be likely to blur or rub off, but may be washed off when it is necessary to have them removed.

Practice brings increasing facility in lettering and a better grasp of its decorative possibilities, and thus gradually puts the pupil in a better position to adapt the principles of good lettering to accompanying conditions, so that in each succeeding Form he is able to bring his lettering more and more into conformity with the laws by which it must be governed when it is used in connection with Design. On this account, the Course outlined in the Manual is arranged so that proficiency in lettering may be attained through easy steps. A Form I class is expected to learn to use single line capitals so as to make them fairly legible, vertical, and regular. The placing of the lettering is to be considered carefully in Form II. The ability to control the light or dark value of the lettering due to the weight of stroke used, is the development expected in Form III; while a Form IV class should be capable of a finer conception of the characteristics of good lettering and should show greater ability in exemplifying them. The use of Roman capitals, and small (lower case) letters is permitted, but not required, in Form IV, Senior Grade.

Alphabets are copied and, as the same general rules apply to all, there is no reason why a class that has gained the power to letter one alphabet well should find it difficult to use any similar alphabet, and a certain latitude might be permitted when the lettering is required for some special design, such as the title of a book; a slant alphabet, however, should not be used. Examples of good lettering suitable for such purposes are to be found in different series of drawing books of recent publication.

The tendency to spend too much time on one division of a subject to the neglect of another must be guarded against sedulously.

CORRELATIONS

Art may be correlated advantageously with probably every subject that is taught in school, but it is in the teaching of Manual Training, Nature Study, and Household Science that it is of the most vital importance. Some of the ways in which it may be of use in connection with these subjects are given below.

MANUAL TRAINING

Art may be correlated with Manual Training through the choice of form and proportion in constructed articles and the selection of suitable materials and colour schemes for these; through the use of borders, all-over patterns, and single decorative units for the adornment of various constructed objects; in the choice and placing of lettering and decoration on book covers; in the making of book-plates, wood-blocks, and stencils; in the furnishings of constructed play-houses or dolls' houses.

NATURE STUDY

Art may be correlated with Nature Study in the arrangement of specimens and collections; in the drawing of plants, trees, animals, and insects, and in the illustration of cells and other structural parts of these; in the illustration of seed germination and seed equipment for dispersal; in the appropriate decoration of covers for note-books or portfolios for mounted specimens.

HOUSEHOLD SCIENCE

Art may be correlated with Household Science in the choice of china used on the table; in the arranging of decorations for the table and elsewhere; in the choice of colour and colour schemes for house furnishings; in the choice and arrangement of furniture; and by the exercise of judgment in the selection of garments that are becoming in colour and fashion.

ORDER AND METHOD

IN TEACHING AN ART LESSON

The following outline, which is intended particularly for Representation, will be found helpful in all Art lessons. It should be adapted to suit circumstances and particular cases.

PREVIOUS PREPARATION BY THE TEACHER

1. Aim established, that is, a definite idea formed of what is to be taught in the lesson
2. Instructions given the pupils concerning preparations to be made by them previous to the lesson, when such preparation is necessary

3. Securing of the materials that will be required for demonstration
4. Preparation of the materials that will be required by the class
5. Placing of the specimens or models.

NOTE.—Where paints are to be used, the paint-boxes should be opened and placed in position and the cakes moistened by the pupils previous to the demonstration by the teacher.

METHOD

Approximate Time:

2 to 5 min.	1. A rapid demonstration by the teacher of the method and order of attack, while the class observes.
1 to 5 min.	2. The distribution of materials.
2 min.	3. The study of the particular object or specimen by each pupil, while the general order to be followed is obtained from the class by questioning.
5 to 10 min.	4. The class begins the work, while the teacher passes quietly around noting every important mistake that is being made.
2 min.	5. The class stops work, and each drawing is held off and compared with the model, while the teacher mentions the mistakes he has observed and asks those who have made these errors to raise their hands. The drawing of any pupil who does not recognize his mistake should be brought forward so that he may see it beside the model, with which he may then compare it at a better distance.
5 to 10 min.	6. The pupils correct the drawings where it is possible or begin a fresh drawing on the other side of the paper.
2 min.	7. The drawings approved of for effort or degree of progress.
2 min.	8. The best drawings brought forward to show the class. Attention called to merits, such as good placing, truth of shape, colour, growth, etc., as the case may be.
	9. When time permits and interest is still fresh, another sketch may be made.

ADHESIVE PASTE

To make one gallon of paste, use four level cups of flour, one rounded tablespoonful of powdered gum-tragacanth, two rounded teaspoonfuls of powdered alum.

Mix the powdered gum-tragacanth in the flour, stir in water to make a smooth paste, add sufficient boiling water and the alum, and stir while it cooks.

A FIXATIVE

Charcoal drawings that are to be preserved should be sprayed with a fixative to prevent their being rubbed. Such a fixative is made of five parts of wood alcohol and one of white liquid shellac.

CHAPTER II

FORM I, JUNIOR GRADE

ILLUSTRATIVE DRAWING

SEAT EXERCISE FOR DEVELOPMENT OF SELF-EXPRESSION

In Form I, Junior Grade, the new pupils may be allowed certain periods in the seats during the day in which to make pictures telling stories. These should not be criticised, but each pupil should be able to tell the teacher what his pictures mean, and he should be given credit for them unless they consist of aimless marks.

At this point a great deal of help may be given the pupil, without destroying his individuality. A few strokes may make his indefinite figures take shape and, as he is not critical, no teacher fearing his own inability need hesitate to help.

Pictures on cards or around the room or sketches on the black-board will give the pupil terms with which to express himself; but to set him copying a picture limits, rather than develops, his power of expression.

Let us suppose that the story he is telling calls for trees. He has not yet thought of a tree, excepting as a pole with cross-beams upon which apples or other fruits hang. The relation of each part to the whole has not troubled him; therefore his drawing bears little resemblance to a tree. He will, however, recognize the photograph or picture of a tree and will admit that it is more like a tree than his drawing is; his struggle to express things as they appear has begun.

SUITABLE SUBJECTS FOR ILLUSTRATIVE DRAWING

The illustrative, or imaginative, drawing in class in Form I may be begun with short sentences expressing action, such as:

Mary pushed the chair across the floor.

Sam ran across the room.

The cat jumped to catch the mouse.

Afterwards short stories within the pupil's experience may be given, as:

The baby was so ill that mother called to Robbie to run quickly for the doctor.

Advantage also should be taken of the things in which the pupils are interested and of events that happen in the neighbourhood.

Other suitable subjects for illustration are nursery rhymes; holiday happenings; special days, as, Hallowe'en, Thanksgiving Day, Empire Day, Circus Day; any childish activity, as sweeping, dusting, raking, weeding; games and sports of all kinds.

Illustrative Drawing should also be correlated with reading, number work, and other school lessons, both in the class periods and for seat work.

METHOD OF BEGINNING THE LESSON

The teacher may open the lesson by making on the black-board a rapid sketch representing some action quite different from the one he intends to have the pupils draw; for example, a boy climbing a ladder. Then he may put the question to the class: "What is Johnny doing?" Every pupil in the class is ready to answer immediately. The picture on the board is then removed, and the teacher proceeds as suggested in the type lesson. If he sketches readily, this method of beginning acts as an inspiration to the pupils. They may be led to see that a story can be told in three ways; it may be spoken, written, or pictured. The pictured method appeals to them, because all can understand it. The method of beginning must be varied, however, and it is not necessary that the teacher should make drawings every time a lesson of this kind is taught.

TYPE LESSON

SUBJECT

Mary pushed the chair across the floor.

METHOD

When the class is listening attentively, repeat the sentence, "Mary pushed the chair across the floor", endeavouring to make the action as vivid as possible.

Ask the pupils to close their eyes and think of Mary. "It is a heavy chair and Mary has to lean forward so that she can push hard. Think how her arms look. Where are her feet? Does her skirt hang lower in the front or in the back?" After putting these questions, which the pupils answer for themselves, mentally, ask them to open their eyes and make a picture of Mary pushing the chair.

While the pupils are working, go about among them quietly, making mental notes of their mistakes. In from three to five minutes, no longer, have them sit back with their drawings held at arm's length where they can study them, while you ask questions relating to the mistakes that you have observed, such as: "How many have drawn Mary too small for the chair? Too large? With her feet so high that she appears to be in the air? How many have the lower ends of the chair legs higher than Mary's feet, so that she appears to be holding it up?" Watch to see that those who have made these mistakes discover their faults. If the class finds it difficult to get the action, dramatize the sentence. Call a little girl forward as far as possible from the class, so that all can see her, and have her push a chair across the room. If necessary, let those in the back seats stand or move quietly forward to a place from which they can see.

As the little girl pushes the chair, call attention to the relative position of feet, hands, knees, head, elbows, having the pupils note particularly the points where mistakes were made in their first attempt.

Let the pupils close their eyes again and call up the mental picture, then turn their drawings over and try again on the other side of the paper, or complete the first drawing if it can be corrected.

Send the pupils with good drawings to the front, so that those in the seats may compare their pictures with ones that tell the story better. Let the class choose the one which tells the story best.

The dramatic element is the thing of vital importance in illustration; and an illustrative drawing in which this dramatic element is present, even though the figures are but poorly drawn, may be much better than one with figures well drawn, which is lacking in this vital element. The teacher should do little if any criticising of the drawings in Form I. His purpose should be to direct the attention of the pupils to those things which he judges by the mistakes in their drawings have been overlooked and to lead them to discover for themselves where their drawings are faulty, in order that their future efforts may show improvement.

GAMES AND SPORTS

Among the many games and sports that may be taken with pupils in Form I, Junior Grade, are hide-and-seek, football, hockey, building a snow man or a Teddy bear or a snow fort, snowballing, skipping, sliding, and skating.

Certain games and sports seem to be popular in some localities and almost

unknown in others. The teacher must choose for illustration those that are familiar to the class, and he should make use of them at a time when interest in them is at its height.

He may begin a lesson by describing briefly, but as vividly as possible, some game he has seen which is common to the locality.

The pupils may then close their eyes and try to imagine the game as described, afterwards proceeding with charcoal, black crayons, or coloured crayons, to represent it by a picture or a series of pictures.

AN EXAMPLE

The tail-piece shown below is a fair example of what may be expected from a Form I class. This is a drawing by a Form I boy, and has been greatly reduced in size. The class had been given a sleigh ride, and the next day the pupils made pictures describing their outing. No two drawings were alike. In the drawing shown, the boys are seen scampering to the sleigh in which the two chaperones are already seated. Marvellous as are the hats of these ladies, they pale in comparison with the impossible steeds.

It is only when attempting to depict a similar scene that one realizes how much the small boy has accomplished in this drawing, notwithstanding his inaccuracies. He is just emerging from the symbolic stage; the few detached houses stand for the terraces in a city street, the larger building represents the schoolhouse separated from the other houses and the street, as the piece of fence indicates. These are unimportant but necessary details. The hurry, the capacious sleigh, the horses, the interested onlookers, the restraining chaperones, and that nonchalant hero of the occasion, the driver—these are of consequence to the boy and loom large in his picture.

In all illustrative work the teacher must endeavour to get the pupil's point of view. He may find in the absurd pictures a fount of amusement to be inwardly enjoyed, but the pupil's thought is not absurd, and to depreciate or make fun of his effort may result in the stunting of his development and will most certainly destroy spontaneity.

When pupils are to have an outing or are to be given the opportunity of seeing a circus procession or a parade of any kind, they should know beforehand that they will be allowed to make pictures describing what they have seen, when they return to the class-room.

NURSERY RHYMES

A list of nursery rhymes suitable for illustration is given in the text for Form I, Senior Grade.

REPRESENTATION

PLANT STUDY

Pupils in Form I, under the guidance of the teacher, should be able to make creditable pictures of the flowers mentioned in the General Introduction. It is not always necessary for the teacher to draw the specimen before the class, but he must use the chalk frequently to show the method, never permitting his class to copy his work, but constantly calling attention to direction of stem, differences in shape, and position of masses. He must impress upon his pupils that they must look carefully to see where each part is and, after having drawn any part, they should compare with the plant to see if it has been correctly placed.

DRAWING OF A SPRAY OF GRASS IN COLOUR

(Time, twenty to thirty minutes)

MATERIALS

For the Teacher:

Coloured chalks, a spray of grass pinned up at the front against a light background where all can see it, and a large piece of drawing paper fastened to the black-board with a drop of mucilage or a gummed label.

For the Pupils:

On each desk a box of coloured crayons, two sheets of 6″ by 9″ paper, and a specimen of grass. The latter may be laid upon the sheet of paper on the desk to

the left of each pupil. This method of placing the specimens is particularly helpful to a class of beginners. The teacher should consult the General Introduction for other ways of placing specimens.

Each pupil should have a good specimen and, if possible, but one variety of grass should be used.

METHOD

Teacher: "How graceful, yet full of life our grasses seem. They look as interested as you do when you are going to have your pictures taken. Let us be as fair to-day to our little visitors from the fields as we would expect the photographer to be to us.

What must we be careful to get right? Colour, shape, and something else, most important of all, the direction of the stem, because it tells how the grass grows.

Some plants run along the ground and cling to everything they can reach. Not so our gay, independent little grass. Others have a strong, rugged stalk. Let us try to draw the grass stem as it grows.

Look at this specimen, which is not exactly like yours. I shall make a picture of mine while you watch, first sweeping in, just as the stem grew from the earth upward, a line of green chalk so faint that we may call it a whispered line.

Do any little branches show in the head? They come next and must be put in just as they slant from the stem. Now for the head; we must shape the little strokes in the way the tiny tufts of flowers grow. The blades come next. First a light line is drawn where each blade joins the stem, to get the right slant; then each blade must be shaped with long strokes, widening toward the middle and tapering to its sharp point.

Does the stem look strong enough, or must I strengthen it above and below each blade?

Look again at the colour; is there a little red or violet in the top, and should I add a little brown along the side of the

stem or the edge of the blades? I shall put my picture away now. It is your turn to make a picture of your spray."

The pupils now select the green crayon and draw the light direction line; then compare it with the specimen and correct, if necessary, without erasing. After each step the paper is held at arm's length beside the spray of grass, and a comparison is made. Upon the extra sheet of paper trial strokes are made and colours tested. (One test sheet may be used for two or three lessons.) When all have had time to finish, the drawings are placed at the front, and the pupils choose the best by eliminating those that are not quite truthful.

It is well to exhibit the best drawings for a day or so on the bulletin board, as a reward for those who succeed and as a help and encouragement for all. The illustrations on page 51 are by Form I pupils.

SUGGESTIONS

If a pupil has made a strong effort to improve, it is sometimes a good plan to put his drawing up as showing marked improvement.

Grasses may be represented with coloured chalks, charcoal, black crayons, or coloured crayons.

RELATED EXERCISES

A number of lessons on different grasses and sedges might follow, but not in succession. Interest is kept alive and better results are obtained when the drawing lessons are varied.

SPIDERWORT IN COLOURED CRAYONS

(Time, twenty to thirty minutes)

AIM

To get each pupil to feel and express the vigorous life, peculiar growth, shape, and colour of the specimen he is studying.

MATERIALS

FOR THE TEACHER:

Coloured chalks to be used on the black-board or on a large sheet of paper fastened to it.

Kennedy Mas
on 1 BOYS.
T. N. M.S.
Vivian Dudley
1 BOYS
T. N. M.S.
Teddy Smelgra
1 B
T N M S.

For the Pupils:

On each desk a box of coloured crayons and a sheet of 6″ by 9″ drawing paper. One good stalk of spiderwort, with leaves and bloom, to every three or four pupils. For the placing of these consult the General Introduction.

METHOD

Teacher: "We have a treat in store for us to-day. What fun it will be to make fine pictures of the pretty spiderwort! In what way is it like the grass we drew a few days ago? John, stand up and hold your arms in the way the first leaves grow. Are John's arms long enough? Hold your arms up like the second pair of leaves, Annie. See where the leaves begin, how very close they are to the stem. They wrap around it so as to hide it, but they soon stretch out and away. How is the stem different from that of the grass? Did you ever start out to go down town one way, then change your mind and go in a different direction? Do you think the leaves had anything to do with the stem's change of direction?

Place your paper the way the spray will fit on it best. First, put in a whispered line, to show how the stem grows and the slight changes in its direction. Turn your paper over now and on the wrong side of it make a blue spot. Hold it off so that you can look at it and the flower at the same time. Does the blue match the hue of the pretty three-cornered blossom? What does it need to make it look right? Make a very faint blue spot and rub violet over it. Have you matched the colour now?

Notice the green leaves that peep from under the violet petals. These are called sepals. All close your hands and let them hang from your wrists as the buds hang from their pink stems.

With the blue and violet crayons shape out the flowers now, at the top of the light direction line. Hold your paper so that you can see both your picture and the flower. Have you been quite truthful? Make it better if you can. Choose the crayons for the buds and their stems and make them next. Compare with the real buds. Should all the stems show? Make your buds look like the real ones. Next, to get the right slant, put a light line where each leaf joins the stem. Compare, to see if your lines point in the right direction, then shape out each long, pointed leaf with long, green strokes. Compare again with the real leaves. Can you make them look more natural? Last of all, look carefully to see how thick the stem should be, noticing that in places it is hidden by the leaves, and draw it,

making it firm and strong. Once more, hold your drawing off and compare it with the spray. Have you made a truthful picture? Letter or write your name neatly in the lower right-hand corner of the paper. Each row of pupils will now come forward in turn and hold up the drawings, so that we may pick out the best and put them up for a day or two where all may study them."

RELATED EXERCISES

Express flowers of the season in different mediums. Those having very characteristic shapes; for example, golden-rod, wild aster, and harebell, in the Fall, and tulip, iris, and daffodil, in the Spring, may be rendered successfully with charcoal or black crayon.

Flowers such as the salvia and garden aster depend for their beauty largely upon their vivid colouring. Such flowers should always be in colour. The pupils of Form I should be allowed to use colour very freely.

TREES AND LANDSCAPES

For help in the drawing of trees and landscapes, which may be necessary in Illustrative Drawing, the teacher is advised to consult the lessons for Form I, Senior Grade.

DRAWING FROM TOYS

(Teddy bear, from memory)

AIM

To get the pupil to see form and to express it as he sees it.

MATERIALS

For the Teacher:

A brown Teddy bear and a piece of white chalk.

For the Pupils:

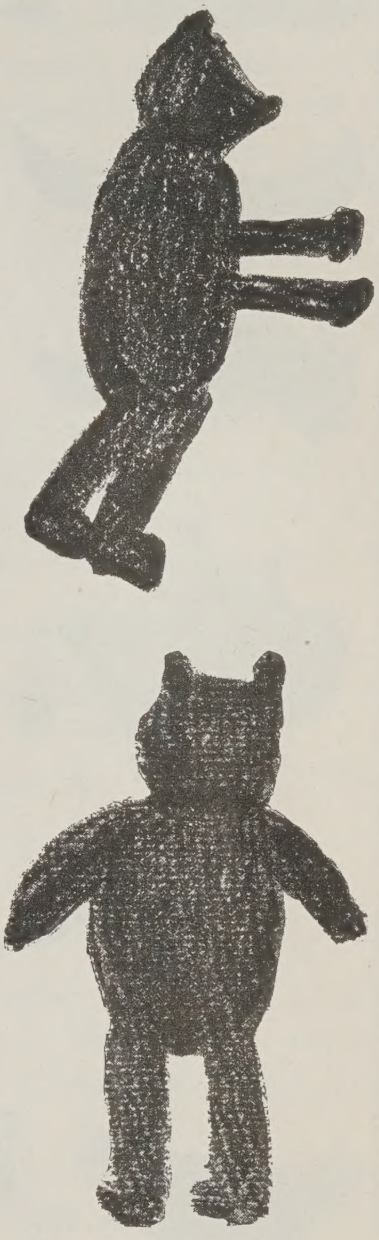
A sheet of drawing paper and brown chalk, or charcoal, on each desk.

METHOD

The teacher, holding the toy in one hand, steps to the black-board and, with the side of a short piece of chalk, rapidly shapes out a mass drawing of the Teddy bear; then turning to the class he says: "Of what have I made a picture?" The

answer is eagerly given. He then continues: "How many would like to make a picture of Teddy?" The desire is unanimous. "Well, you must watch him very closely for a moment or two, for I shall put him in the cloak-room, where you cannot see him, while you make your picture of him."

The bear is then held up in a position different from the one that was drawn on the board. The teacher moves from place to place as he calls attention to the shape of each part that can be seen by the class in the position in which he holds the bear. Every pupil is given an opportunity to get a good view of the bear in this position. The pupils then close their eyes and imagine that they are making a picture of the bear on some large, white surface such as a wall. The teacher fixes their attention on the subject by saying: "Make the head first, shape out the nose now, and the round ears", and so on. Then the Teddy bear is again held up, while the pupils tell some of the mistakes they made in their imaginary drawings.



DRAWING FROM TOYS—
TEDDY BEARS

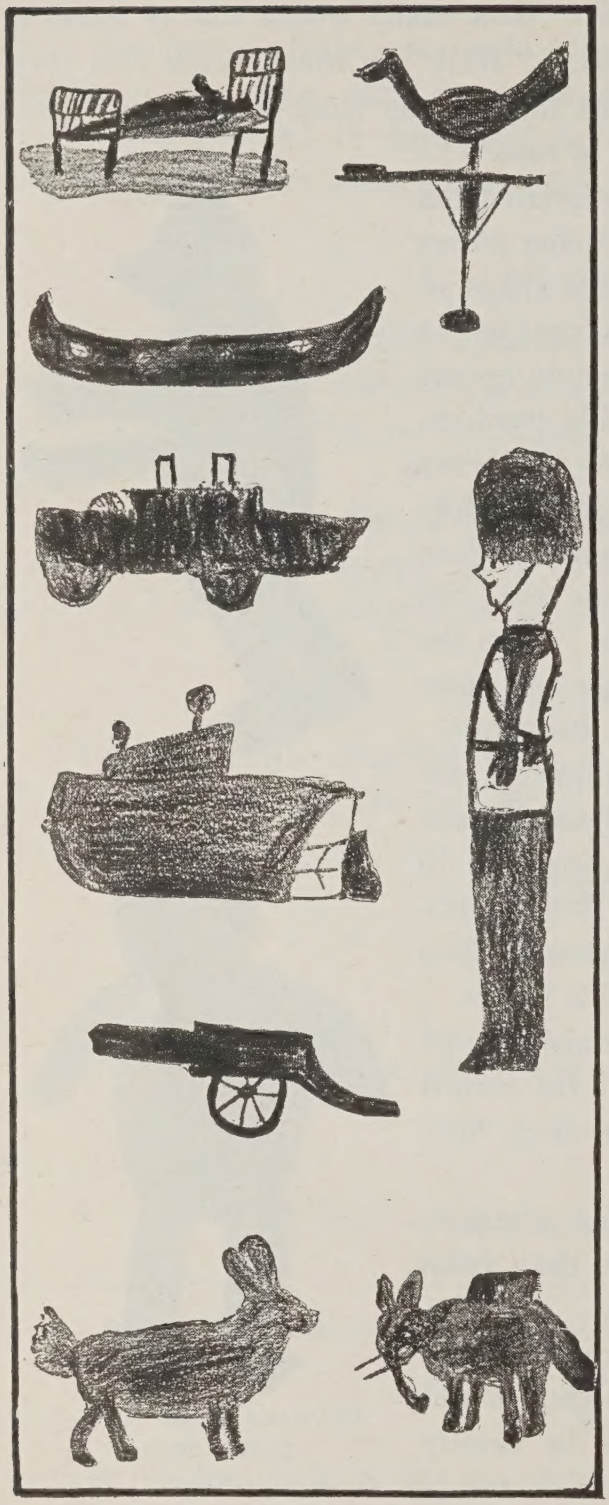
The bear is now put away, and the pupils decide which way to turn the paper to have the drawing look best; then, with their chalk or crayon they proceed to make a fine, big, mass drawing of him. Every little while they close their eyes to recall his image and open them to compare their drawing of him with this image.

In about five minutes the drawings are finished, and the bear is again brought out, in order that the pupils may make comparisons and discover where they have made mistakes.

If any pupil has difficulty in finding his mistakes, his drawing should be held beside the bear, so that, from his seat, he may compare the two side by side.

The lesson may end here, with the arranging of the best drawings at the front and, in that case, should not have occupied more than from fifteen to twenty minutes.

If interest is still fresh, the bear may be hidden again, while the pupils make new drawings on the other side of the paper, correcting the mistakes made in their



DRAWING FROM TOYS

first attempt; or they may study the bear in a new position and again make drawings from memory.

Drawings from memory after careful study (except in the case of plants) are usually better than those made from the model, but exercise should be given occasionally in drawing from the model.

DRAWING FROM THE MODEL

Following a lesson of this sort where the object is drawn from memory, on another day three or four objects of the same kind may be placed so that each pupil has a good view of one, and drawings may be made from these, after the shape and the relation of the different parts have been noted by the pupils under the direction of the teacher.

CHAPTER III

COLOUR

THE PUPILS in Form I, Junior Grade, should become familiar with the names of the six colour families—red, orange, yellow, green, blue, and violet, and should learn to classify different coloured materials or objects as belonging to one or another of these families. A sample of the standard colour should be set up somewhere in the room, and all the colours that appear to belong to it should be grouped with it. Standard green is the greenest green that can be imagined, a green that suggests neither yellow nor blue and cannot be spoken of as either light green or dark green. The standard of any colour is that colour at its normal value and at full intensity.

A Colour Hunt is an instructive game that may be played with Form I, Junior Grade pupils. A coloured picture is hung up in front of the class, and the pupils point out all the different places in which each colour appears. A piece of many-coloured woven or printed fabric, or a bouquet of flowers may take the place of the picture.

A sequence of lessons on Colour is given in Form I, Senior Grade, none of which would be found too difficult for an average Form I, Junior Grade, in the latter half of the term.

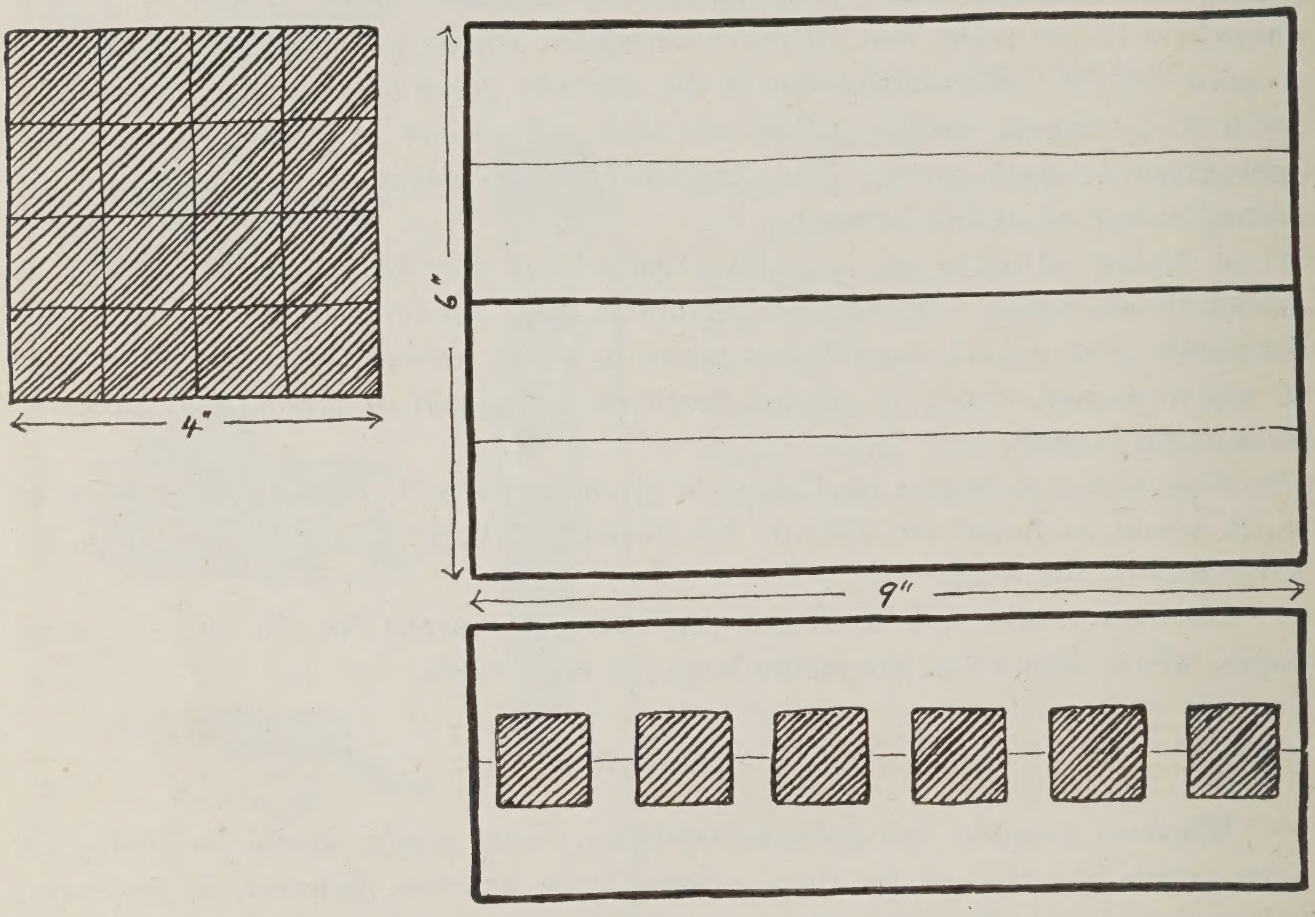
Coloured chalks will be found preferable to crayons for the use of young pupils, where shapes that are rather large are to be made.

DESIGN

Wherever possible, the patterns made by young pupils should be applied to some article constructed by them. Some little practice, however, is necessary, before they can make units that are nearly of a size or can space them at all regularly.

Their first borders may be made with small squares obtained by each pupil folding and creasing a square of coloured paper so as to make sixteen small squares which can be pulled apart easily. A sheet of 6″ by 9″ drawing paper is then folded lengthwise to form four strips. This is separated along the middle crease, forming two separate strips each with a middle crease.

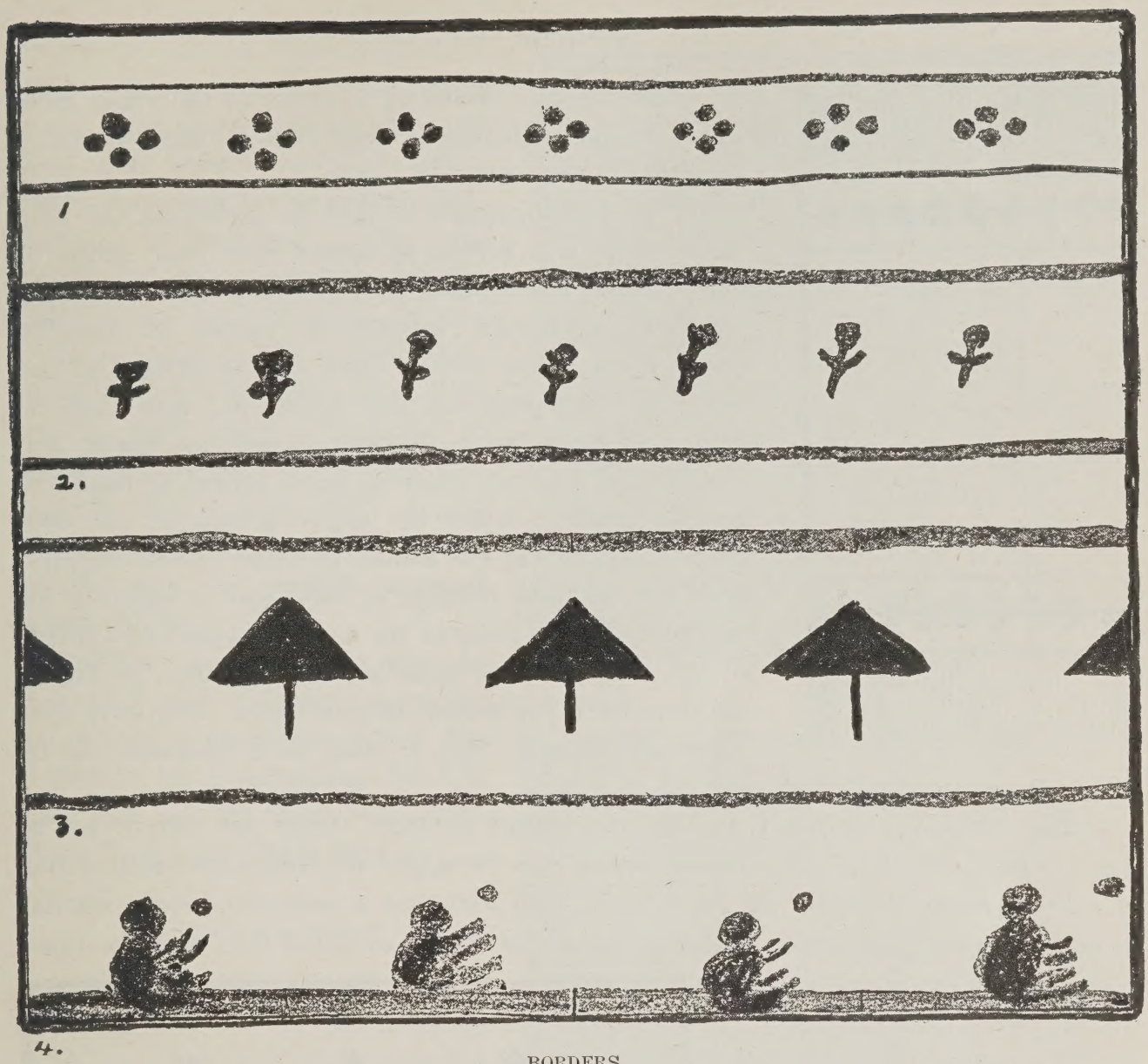
Along the crease in one of these strips the little squares are arranged, the pupils moving them along until they look well and are evenly spaced. A great variety of borders may be made by different groupings, spacings, and positions of the squares. Oblongs and triangles may be made from the small squares by creasing and separating and may then be used similarly. Wooden shoe-pegs or small sticks, and such seeds as those of the pumpkin, squash, watermelon, or citron are useful for the same purpose.



DESIGN

While the class is at work, the teacher should go about among his pupils, appreciating what is good and making suggestions where improvement is needed. Each pupil should draw with a coloured crayon the best border he has been able to arrange, as soon as it has been approved of by the teacher.

When a few good borders have been made, a problem in construction calling for the application of a border should be given.



BORDERS

APPLIED DESIGN

TOWEL WITH BORDER

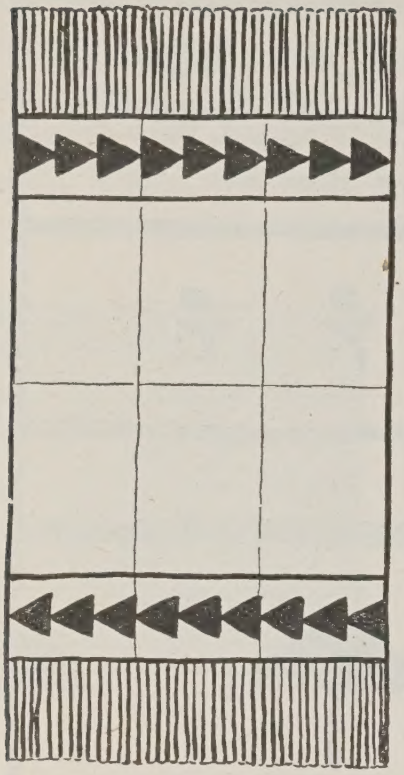
AIM

To make a small paper towel and decorate it with a suitable border.

MATERIALS

For the teacher and pupils: Each a sheet of 6″ by 9″ drawing paper, a pair of scissors, and a blue or a red crayon.

METHOD



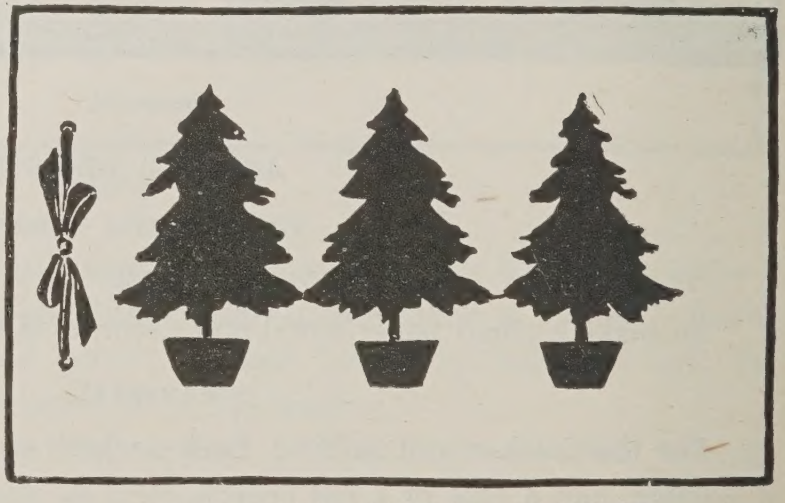
The teacher, standing in front of the class, gives directions and illustrates what is to be done by doing it with his own sheet of paper.

The drawing paper is laid on each desk the long way across and folded to make four long strips of equal size. The outside fold is well creased and then carefully separated, leaving the sheet of drawing paper three strips wide. This is now placed on the desk the long way up and down, the near edge is folded to meet the back edge, opened out again, and the bottom and top edges in turn folded to meet the middle crease. When the paper is opened out once more, the creases are found to form twelve oblongs. The row of three oblongs at each end is required for the border and fringe of the towel. About two thirds of the length of the space should be taken for fringe and one third for border, or vice versa. The strip that came off the side may be used as a measurer, as its width is two thirds of this space.

The towel is now ready to have the border applied. Only one colour, red or blue, is used for this. The border space may be edged on both sides with a line of colour; between these two lines each pupil arranges a coloured border similar to one he has already made. The fringe is cut to the coloured line, and the towel is completed, producing a result similar to the illustration.

If another strip is removed from the sheet of drawing paper, the proportions are suitable for a sideboard scarf or a table runner, for either of which the same sort of decoration is appropriate.

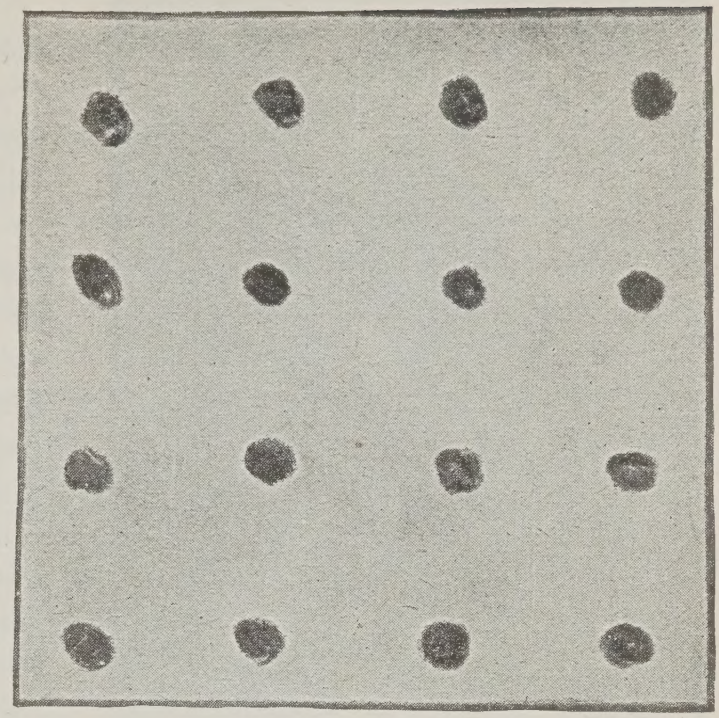
Where the primary room is fortunate enough to possess a dolls' house, these problems may



APPLIED DESIGN—CHRISTMAS BOOKLET

be worked out in cloth instead of paper. Linen, scrim, cotton voile, even unbleached cotton may be used, and window curtains, tablecloths, hangings for doorways, bedspreads, or anything similar, required for the furnishing of the dolls' house may be made by the little designers. Some crayons are manufactured, designs made with which will stand washing. If these crayons are used and the designs are pressed with a hot iron, the articles decorated by the pupils may be washed without being spoiled.

Other things that may be decorated and different plans for arranging decorative units are shown in the illustrations for this class and also in those given with Form I, Senior Grade lessons.



ALL-OVER PATTERNS

For the making of all-over patterns the 6″ by 9″ drawing paper may have a 3″ strip removed to make it a 6″ by 6″ square. The paper may be prepared beforehand by the teacher or by one or two members of the class more deft than the average Form I, Junior Grade pupil, or its preparation may form a measuring exercise for a Form I, Senior class.

CROCUS

When the 6″ by 6″ squares are in readiness, each pupil should fold and crease his so as to make sixteen equal squares, to help him to space evenly the unit that is to be repeated.

The unit may be chosen for the class by the teacher, or each pupil may choose his own from a number of suitable ones suggested by the class and drawn on the board by the teacher. Any of the units already used for borders would be suitable. Others that could be drawn in this class are a round dot, a ring, a lilac leaf, a bud, or other simple form suggested by the pupils. For special purposes, such as the Easter constructive work, units appropriate to the season but not too difficult in shape for the class should be selected.

Any one colour, or any one colour and black, should be used in the colouring of these patterns, so as to allow the pupils a certain amount of individual choice, while using sufficient restraint to prevent their making ugly combinations of colour.

CHAPTER IV

FORM I, SENIOR GRADE

ILLUSTRATIVE DRAWING

ILLUSTRATIVE DRAWING should be taken up in this Form in practically the same way as in Form I, Junior Grade. A little truer telling of a story by pictures is to be expected here, however, and the seat work should take a more practical form. For

A GAME OF HOCKEY—BY A FORM I PUPIL

instance, the pupils may make pictures of all the objects mentioned in any other lesson and write or letter the name under each picture. At another time the teacher may write on the black-board a number of sentences expressing action, for the pupils to illustrate in their seats; or they may express a whole lesson by a series of pictures.

In number work, the making of pictures in this way may be made to provide profitable as well as interesting exercises for impressing tables and enabling the teacher to see at a glance whether or not the facts he has taught have been understood.

The pupils are usually very much interested in making pictures to illustrate nursery rhymes. One method of taking the illustration of a nursery rhyme with a Form I class is suggested here:

LITTLE MISS MUFFET

The teacher seats a little girl on a bench or table in one of the front corners of the room, so that the whole class may see her sitting on a large dictionary or a pile of books—something which will represent the "tuffet". She holds a bowl on her knee and dips a spoon in this, carrying it to her lips as though she were eating.

The pupils watch this tableau for a while and are then allowed to tell whom they think the little girl represents.

This question being settled, they are encouraged to describe the place where they like to eat the bowl of bread and milk or piece of bread and butter that mother gives them after school, and so suggestions are made as to Little Miss Muffet's probable surroundings.

The little girl is then taken down from the bench or table and, after the first verse is repeated for them, the pupils close their eyes and think of the unsuspecting Little Miss Muffet eating away busily at her curds, with the spider dangling above her. As soon as they imagine they can see her, they open their eyes and make their pictures on one side of the drawing paper, using charcoal or black crayon.

During the lesson the teacher should have the pupils correct their drawings after the plan given in the lesson in Form I, Junior Grade.

When they have had time to make their pictures from the first verse, the second verse is repeated as vividly as possible by the teacher, and the pupils show in a new set of pictures how they imagine the startled Little Miss Muffet would act.

At the end of the lesson the best pictures are put up at the front, so that the whole class may be helped and inspired by them.

LIST OF NURSERY RHYMES SUITABLE FOR ILLUSTRATION IN FORM I

Little Bo Peep; Sing a Song of Sixpence; Rock-a-bye Baby, Thy Cradle is Green; Ding Dong Bell; Old King Cole; Hush-a-bye Baby on the Tree Top;

Little Tom Tucker; Hark, Hark, the Dogs Do Bark; Three Little Mice sat down to Spin; The Mouse ran up the Clock; Jack and Jill; Little Boy Blue; Wee Willie Winkie; Mary, Mary, Quite Contrary; I had a little Pony; Little Miss Muffet; Little Jack Horner; Jack be Nimble; Pussy cat, Pussy cat! Where have you been?; Humpty Dumpty; and others.

In addition to the subjects already treated, simple fairy tales and other stories will be found excellent for illustration.

The following stories are recommended by a Kindergartner of experience, as likely to appeal to the imagination of the children. Stories should be told, not read to the class.

The Sleeping Princess, from a Kindergarten Story Book, by Jane Hoxie; *Thumbling,* from the Boston collection of Stories (adapted from Hans Christian Andersen); *Wishing Wishes, Giant Energy and Fairy Skill,* and *The Search for the Good Child,* from "Mother Stories", by Maud Lindsay; *The King of the Golden River,* by Ruskin; *Raggylug,* from "Wild Animals I Have Known", by Ernest Thompson-Seton; *The Visit,* from "More Mother Stories", by Maud Lindsay; *Little Deeds of Kindness,* from "In the Child's World", by E. Poulsson; *The Legend of the Dipper,* from "For the Children's Hour" by Carolyn Bailey.

SILVERLOCKS AND THE THREE BEARS

AIM

To develop the pupils' imagination and power of expression.

MATERIALS

A sheet of 6″ by 9″ drawing paper and charcoal or coloured crayon on each pupil's desk.

METHOD

As a preparation for this lesson, the teacher gives some time previously one or more lessons on drawing the Teddy bear, similar to that given among the Form I, Junior Grade lessons. Now, standing before the class he tells the story of *Silverlocks and the Three Bears* as vividly as possible. Five minutes is spent in a discussion of the story, as to the probable appearance of the house, the bears, and the several situations in which Silverlocks found herself.

The pupils close their eyes to see which of the many scenes in the story they see most distinctly; then, opening their eyes, each proceeds to depict the scene which is most vivid to him.

As they work, the teacher passes round, noting any mistakes that are being made. He then steps to the front and asks all to close their eyes while he calls attention to these mistakes, perhaps in some such way as this: "Silverlocks was a very little girl, and the trees in the wood were tall trees. How high up against the trees would her head come? You will remember that the bears' house was two stories high, how big would little Silverlocks look beside it?" The pupils then open their eyes and look at their drawings as the teacher asks: "How many have made Silverlocks too tall and the trees and house too small?" The pupils discover their mistakes and, where possible, correct them. When they find the paper too small to express things in proper proportion, they may be shown pictures where only a part of the house appears and where the upper part of the trees is cut off by the top of the picture. The pulling down of a window shade will help them to realize that we do see trees and houses occasionally in this way.

The best drawings may be collected and put up at the front. A good exercise in judgment would be to have the pupils choose the picture they consider best, giving their reasons for this decision.

GERANIUM IN FLOWER-POT—
BY A FORM I PUPIL

REPRESENTATION

DRAWING FROM FLOWERS

The lessons given in Form I, Junior Grade, on the drawing of grasses and flowers are equally suitable for Form I, Senior Grade. As in Illustrative Drawing, better work is to be expected from the senior pupils. Many of the mistakes made by very young pupils are due to lack of muscular control but, as each effort made to draw something well helps to overcome this trouble, there should be a marked difference between the drawings made at the beginning and those made at the end of the first year at school. In Form I, Senior Grade, special attention should be paid to direction, relative position, size, and shape of masses.

Excellent flowers for drawing in the Spring are tulips and daffodils, while the sunflower, California poppy, and salvia in the Autumn make delightful studies.

DAFFODIL IN COLOUR

AIM

To get each pupil to express as truthfully as he can, the growth, shape, and colour of the particular daffodil that he is studying.

MATERIALS

For the Teacher:

Coloured chalks.

For the Pupils:

On each desk a box of coloured crayons and a sheet of 6″ by 9″ drawing paper; one good specimen with flower, long stem, and leaves, to every five or six pupils. Consult the General Introduction for directions regarding the placing of specimens.

METHOD

The teacher should make rapid sketches to show the class the different positions of the flower. The part of the blossom that is nearest should be sketched first. In the side view, one of the petals is nearer than the flower cup. The teacher selects the yellow chalk and draws this petal in mass. It must be made shorter and broader than those on each side, as it extends toward the person drawing it and is, therefore, noticeably foreshortened. The petals on each side of it are drawn next, then, with a deeper yellow—possibly a yellow-orange crayon—the cup with its crinkly edge is drawn also in mass, and if petal points peep from behind the cup, these are added, as are also any touches of green that show in the petals. In a front view of the flower, the cup is drawn first, and the petals put in radiating from it. Three or four different positions may be roughly shown in a few minutes.

Each pupil now decides which of the sketches on the black-board best represents the flower as he sees it. The black-board sketches are then erased, and the pupils begin their drawings, each putting in, first, a faint green stroke for the direction line of the stem, with its queer little turn at the top and its slight bend backward as though it had braced itself to bear the weight of the blossom. The

flower is put in next and, tapering from the petals, the strong green part that peeps from the sheath; then the sheath is made with faint brown strokes tinged with green, and perhaps a little pink is added at the edges. Next, after the attention of the class has been called to the fact that the green leaves grow up beside the stem, not out of it, a long line is drawn for each leaf, to show the direction in which it bends. Long, green strokes are added to the direction line of each leaf till it is made the right width and shape, and a little blue is added to it and to one side of the stem.

As the pupils work, if their drawings are to be truthful, they must hold them off again and again in such a position that each can compare his drawing with the particular daffodil which he is representing, to see if he is making as true a likeness as possible.

The best drawings should be collected and placed at the front, the pupils themselves deciding which is the very best likeness.

TREES

When trees are in full foliage, the shape of the mass is clearly defined, and they are much more easily represented than at any other time. For this reason September is a particularly good month in which to begin the study of trees.

THE POPLAR TREE IN CHARCOAL

AIM

To teach the class to observe and represent the growth and general shape of the poplar tree as seen in Summer.

PREPARATION

In drawing from flowers or objects, the specimens or models, excepting in rare instances, are brought into the school-room. This cannot be done with trees; therefore unless it is convenient to take the class where they can study the tree from a suitable distance, some special preparation is needed. This may consist of a short talk with the class a day or two before they are to draw the tree, in which the characteristic shape and growth of different trees are discussed in a very simple way. The pupils' attention may be drawn to the level branches of the pine and the disposition of its masses of foliage in clumps; to the umbrella-shaped top of the

elm; to the height and the wide-spreading branches of the maple; and to the great height of the poplar as compared with its width.

If the teacher can sketch rapidly, three or four different trees may be drawn in mass, and the pupils may name these, giving the reason why they think each is the tree they mention. Photographs or other pictures of trees may be put up for examination if the teacher cannot draw, though no other pictures quite take the place of those perhaps far less perfect, which are rapidly sketched before the class. After this general talk on trees, the places where fine poplar trees may be seen are discussed, and the pupils are counselled to choose one of these for study, standing far enough away from it to see its whole shape against the sky or whatever is behind it. It would be a good plan to have them look at a number of poplar trees, trying to see in what ways they are alike.

POPLAR TREE—BY A FORM I PUPIL

In order that the pupils may put what they have learned about the tree into definite shape so as to have a clear image of it before proceeding to draw it, questions should be asked of them as to:

1. The height of the trunk compared with the height of the upper part of the tree.
2. The width of the trunk compared with the greatest width of the upper part.
3. The character of the branching.
4. The shape of the whole mass of foliage.

MATERIALS

For each pupil a piece of charcoal and a sheet of 6″ by 9″ drawing paper.

METHOD

The pupils should be asked to place the paper on the desk with the long edge vertical or horizontal, according to the way in which the tree will best fit upon the paper. They may indicate with their hands just how wide and high

they intend to make it, for the tree must be well placed and as large as it can be made without having the appearance of being crowded on the paper.

They may then be asked to close their eyes a moment and try to see the tree, after which they should begin to draw it, comparing the drawing from time to time with the image in their minds by closing their eyes to think about it, then correcting any place in which the drawing is not like the picture in the mind of each.

As they work, the teacher should go about noting mistakes, so that the attention of the class as a whole may be called to these. In order that each pupil may be led to detect and correct his own errors, the drawings should be held at arm's length, so that they may be compared with the mental image and, as each mistake is mentioned, the pupil should look to see if he has made that mistake and, in case he has, he should at once correct it.

As indicated in previous lessons, the best drawings should be exhibited at the front and, when too much time has not already been used for the lesson, the judgment of the class should be cultivated by allowing the pupils to choose from among the good drawings the one which most resembles the real tree.

THE POPLAR TREE IN COLOUR

(Summer appearance)

AIM

To teach the class to observe and represent the growth, colour, and general appearance of the poplar tree in Summer.

MATERIALS

For the Teacher:

Coloured chalks.

For the Pupils:

Coloured crayons and a sheet of drawing paper on each desk.

As a preparation for this lesson, the pupils might be allowed to take home their drawings from the previous lesson, so as to have an opportunity of comparing them with the real tree at a proper distance. They should also be urged to pay special attention this time to the colour of the foliage, so as to be able to make a true picture of the tree in colour.

METHOD

The teacher might draw on the board a light line to indicate the height of the tree, getting the pupils to show what portion of this should be trunk, how wide the upper part of the tree should be, and how thick the trunk. Experiments with the crayons should be made, to see how best to get the proper colour and how and where to begin to represent the foliage. This suggestion of the tree should then be rubbed out and the lesson continued along the lines of the previous one.

LANDSCAPE DRAWING

Although landscape work appears very difficult, young pupils are fond of it and, as they have already, in their illustrative drawings, made attempts at representing earth and sky, the lessons on landscape drawing come as a welcome help.

First lessons in landscape drawing must necessarily be treated in quite a different way from any lessons that have been taken up hitherto. They are intended chiefly to make the pupils observe the appearance of trees and the earth in relation to the sky, and also to show them how to use charcoal, chalk, and coloured crayons to represent what they have observed.

The best time to begin these lessons is in the winter after the first snow has fallen and covered up all the distracting, if delightful, details of paths, grass, and flowers.

The first lesson may consist of covering the lower part of a 6″ by 9″ sheet of drawing paper with chalk to represent the snow-covered earth, leaving the colour of the paper for the sky, and putting in a line of distant trees with zigzag strokes of charcoal applied so lightly that the result is a tone of gray.

At first some pupils will be found to draw the distant trees quite detached from the earth and looking more like a caterpillar in the sky than a line of real woods. A short discussion on the ways of trees will call the attention of the least observant member of the class to the fact that trees grow out of the earth and do not float in the sky. Fortunate is the teacher who can let his class observe the distant woods from the school-room windows and note the smooth line of the snow-covered earth against the gray mass of trees, the irregular tops of which are seen against the pale wintry sky.

Landscapes, such as the Winter Sunsets, which were drawn by Form I pupils with coloured crayons, can be used in the making of blotters, calendars, and booklets for Christmas. It is a very hopeless landscape in which a small com-

position cannot be found which will look well when cut out, edged with a firm crayon line, and mounted on a suitable background.

Christmas booklets made of drawing paper or paper of a heavier weight, with one of these small landscapes mounted on the outside of each and a Christmas verse written on the inside in the pupil's best writing, make souvenirs that it delights him to take home and present to his parents as his own work.

WINTER SUNSET LANDSCAPE WITH COLOURED CRAYONS

MATERIALS

For each pupil, a box of coloured crayons and a sheet of drawing paper.

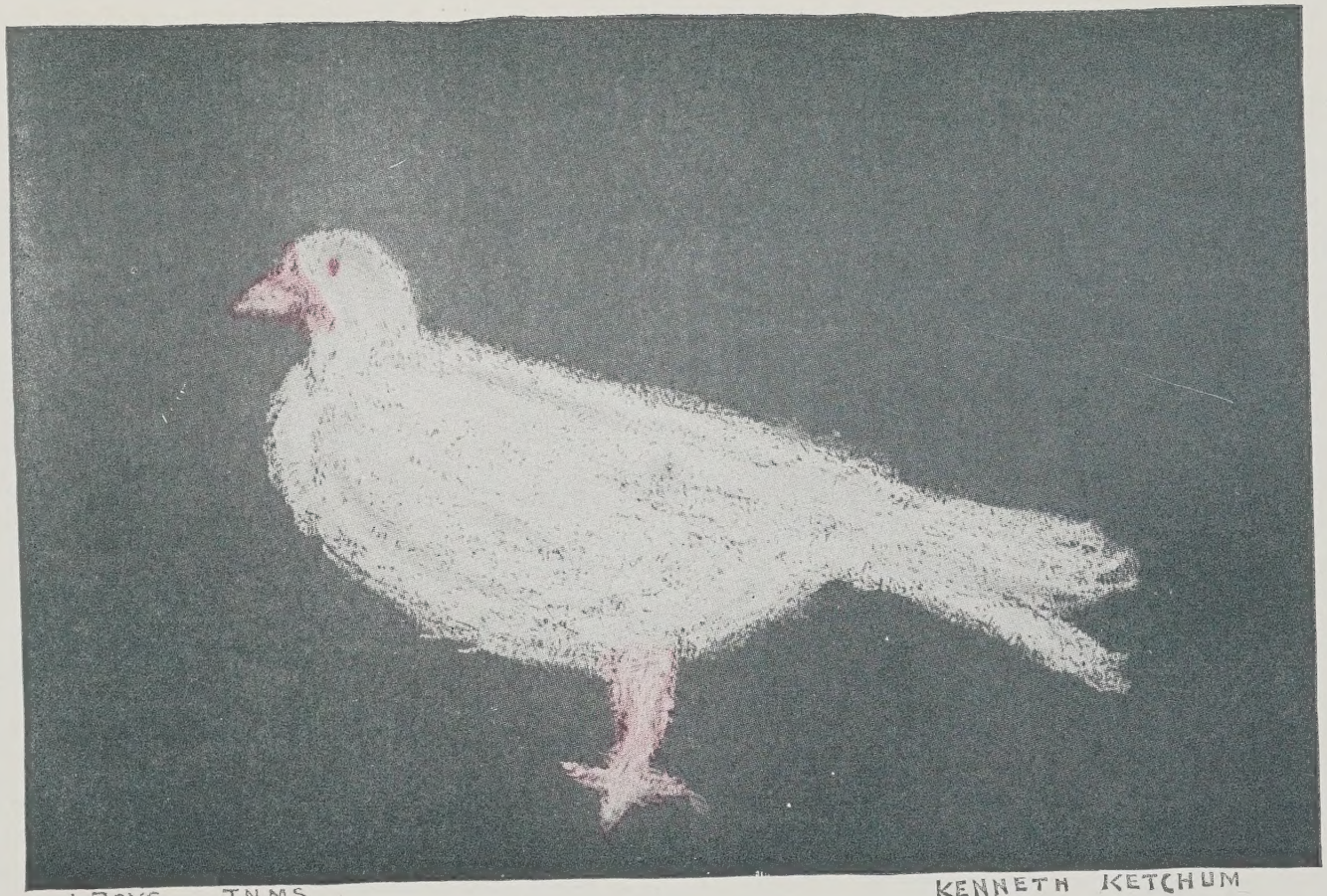
As a preparation for such a lesson there should be careful observation of the colours seen in the western sky and of the appearance of the snow-covered earth at sunset time.

METHOD

After a short discussion with the class regarding the appearance of the sky just after the sun has disappeared, the teacher, holding a sheet of drawing paper with one hand against the black-board where all can see it, draws a blue crayon line dividing the paper into two spaces—all above the line for sky, all below for snow-covered earth. He also shows the class by chalk lines on the board that this line might be made to represent level land, a hillside, or rolling country.

The pupils place their papers the long way across on their desks with the rough right side up, and each, selecting the blue crayon, draws the line which will best represent the landscape he wishes to depict. Then with the blue crayon held very loosely under his hand, he puts a faint blue line across the top edge of the upper space. A faint yellow tone is blended into the blue; next, a faint orange tone is carried down to the blue line, deepening as it reaches it and faintly tinging both the yellow and the blue above. Lastly, the red crayon is put on in the same way, faintly tinging the three colours already applied and deepening into a few irregular lines of crimson at the spot where the sun is supposed to have just disappeared.

Before each colour is applied by the pupils, the teacher shows, on a sheet of paper held against the black-board, how this is done, and also that the crayon must be held very lightly and carried back and forth in a slanting direction across the paper to get an even tone. As the pupils work, he must go



I BOYS T.N.M.S

KENNETH KETCHUM

among them, carrying his paper with him to show those who are putting the colour on too heavily how it may best be managed. Those also who are making even bands or stripes of colour must be shown how to lay the crayon on so as to get the irridescent effect of one colour showing through another.

The sky being completed, the distant trees are now put in, starting in the blue line and extending a short distance up into the sky. For the line of woods, a light zigzag stroke of blue, which turns to a violet against the red orange of the sky, is used. If this is too bright, a faint tone of gray may be put over it with the black crayon. In the bottom of the low mass of woods the blue tone is strengthened and is then extended below the trees, to represent the appearance of the snow in the distance. The blue tone is made gradually fainter as it comes toward the bottom of the paper, disappearing altogether about two thirds of the distance down from the trees.

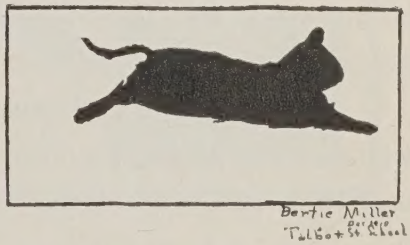
Even though in this lesson the teacher has drawn the landscape little by little before the pupils, in order to show them the proper handling of the crayons, it will be found that in very few cases, if any, has his drawing been copied. In every other lesson outlined here, the pupil's own thought has been developed and, having had this previous training in expression, each will be intent on working out his own idea in the landscape lesson. It will probably be necessary, however, to have one or two lessons in making sunset skies without the landscape, before the class will have gained control of the medium.

In this, as in all other drawing lessons, the teacher should guard against cultivating an imitation of his own work.

ANIMAL STUDY

Mass drawings of birds and animals make a pleasant change from the drawings from plants and common objects which are more frequently made in the school-room.

The class is an exception, at least one member of which does not possess a pet tame enough to be used as a model. It may be a bantam rooster, a pigeon, a bird in a cage, a squirrel, a quiet kitten, a rabbit, or a well-trained dog.

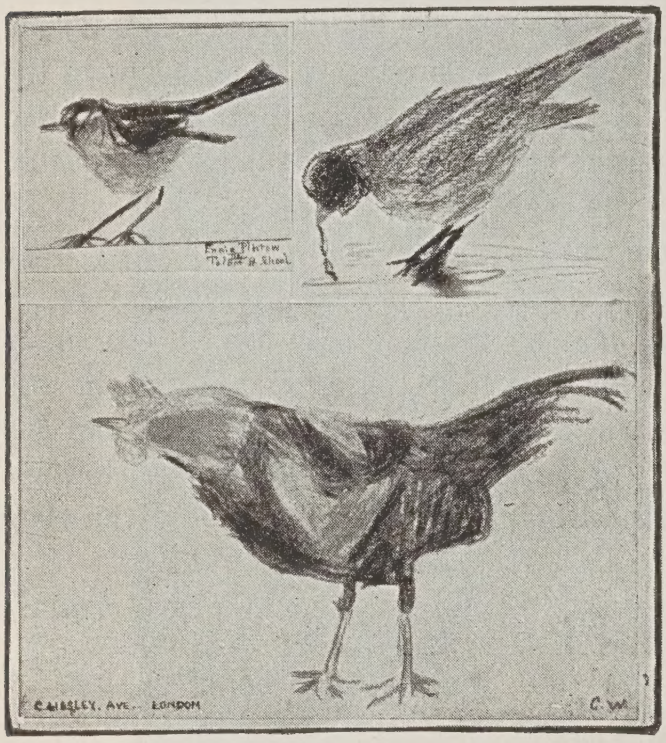


ANIMAL STUDY—BY A FORM I PUPIL

A live model of this kind should be brought after school has been called, as there is less likelihood then

of its being too frightened to assume a natural attitude when it is placed in position on the table at the front of the room. Suitable food should also be provided, and the owner should stand close to the model in such a position as not to obstruct the view while the class is observing it. He should take his seat and draw with the others after the animal has been studied.

Before the animal is brought into the school-room, the class should be warned that they must sit very quietly while they watch the model, as laughter, noise, or disorder of any kind is almost sure to frighten an animal into taking some crouching position not at all suitable for drawing.



ANIMAL STUDY—BY FORM I PUPILS

(Original in colour)

As the owner feeds or plays with the model, the teacher, standing at the back of the room, calls the attention of the class to the different poses it takes, urging the pupils to note the shape of the head and how it is placed in relation to the body, the direction in which the tail points or curves as the case may be, the shape of the legs and their position in relation to the body, the shape of the feet and the way in which they are joined to the legs.

When their attention has been called to all the points they are likely to overlook, the pupils are asked to close their eyes, to discover which attitude they can recall most vividly. They then open their eyes, the animal is removed, and they proceed to draw it in the position that each remembers best, using charcoal or crayons.

A day or two afterwards, the same bird or animal should be drawn again without the model; a story for illustration which would require the drawing of it might be given advantageously.

MASS
DRAWING
FROM
MEMORY
TNMS

OBJECT DRAWING

FROM MEMORY

Arranged on page 75 are several objects drawn from memory by Form I pupils. These drawings are very much reduced in size. When they were made, the object in each case had been studied in the same way as in the lesson on the Teddy bear in Form I, Junior Grade.

FROM THE MODEL

After the Christmas holidays, young pupils are always anxious to show what Santa Claus brought them and, as toys make most interesting models, each may be allowed to bring his favourite toy. Where stands for these are not provided, the toys may be arranged on tables or on the teacher's desk for those in the front seats, and on boards placed across the aisles for the others, so that each pupil has a good view of at least one. The boards should be placed in every other aisle from desk to desk, one at the front of the aisle and one half-way down. They should have a cleat tacked under one edge to overcome the slant of the desks and provide a level surface for the object to rest upon.

Before commencing his sketch, each pupil should decide how much space his drawing will require and, as he draws, he should compare his drawing with the toy to see if he is making a truthful representation of it. The toys on page 56 were drawn in this way with black crayons by Form I pupils.

Great delight is taken in this exercise if the toys are drawn with white chalk and coloured crayons and the best ones cut out and pasted to a Christmas tree which has been pinned up somewhere in the room. The Christmas tree is easily made by folding a large piece of green paper in half and cutting both sides of the tree at once. Teachers sometimes pin these pictured toys to a branch of real evergreen tree, but the result is less incongruous when both tree and toys are cut from paper.

PICTURE STUDY

WOMAN CHURNING—MILLET

The preparation for this lesson depends on the size of the reproduction available. In the present case we will suppose that a print 7″ by 10″ in size has been put up where the pupils have had an opportunity to study it individually.

THE ARTIST

When the hour for the lesson has arrived, the teacher, standing before the class, says: "You have been trying to find out all you can about this picture; before you tell me what the artist has managed to tell you we shall have a little talk about him. I shall write his name on the black-board, Jean François Millet. Although he died before you were born, it is not long ago, and many people who knew him are still alive. He was born in 1814 and died in 1875. How long ago is that, and how old was he when he died? His father and mother were peasants, day labourers we could call them. They lived at a little place called Gruchy in France and worked together in the fields. We can imagine the little Jean going to the fields with his parents, watching them work, trying to help, carrying a drink to them sometimes when the sun was hot, falling asleep under the shade of a tree or a hedge when he was weary.

These scenes of his childhood must have made a great impression on him, for afterwards he painted many pictures of labourers sowing, reaping, gleaning, working in the fields. When he was still a boy, he would take a piece of charcoal from the stove and with it draw, on the whitewashed outer wall of the cottage, pictures of trees and orchards and of peasants at work or plodding to and from the fields.

It is not hard to fancy these friendly neighbours pausing on their homeward way to look at the sketches made by the young Jean, wondering at his cleverness, sometimes discovering a likeness and saying: 'There is Jacques to the life', or 'Who could doubt that that is Marie's shoulder and head?'

His father and mother were anxious that he should study to be an artist and by and by, when he was twenty-three years old, he was sent to Paris.

His long light hair fell loosely about his broad shoulders and, no doubt, his clothes were coarse and home-made, for his fellow students called him 'The man of the woods'. Here is a print of his own portrait painted by himself and we can see what a kind face he had.

He did not stay many years in Paris. He longed for the peasant life he knew so well, for the men and women who worked in the fields, toiling for their families, generous to their neighbours, and happy in their homes. He went to Barbizon, took a house with three rooms, and there with his wife and little family he lived, very poor part of the time, but happy to be once more where he could see the simple, kindly peasants at their work, and there most of the pictures that brought him fame were painted."

THE PICTURE

"You have seen the title beneath this picture. What did Millet call it? How many of you have seen a churn? Was it like this? In what way is this different?"

In some such way the teacher proceeds to draw from the pupils all that they have discovered in the picture. When their ideas concerning it are exhausted, he should question them somewhat after the following fashion:

"How do we know that the artist wished us to look at the woman first? Sometimes, in your pictures, you make the things the story is about, very small. Is that what Millet did in this picture?

Is the woman tall or short? By what in the picture can we measure her height? Did the artist wish us to think she was happy or unhappy in her work?"

Thus the teacher questions here and points out there, until the pupils realize how different from their own homes is this interior, with its solid, queer-handled churn, made perhaps by this woman's great-grandfather, its stone flags, and its one window placed high in the wall, as we can tell by the short shadow cast by the churn.

"How trim and how suitably dressed for her work is the woman! Notice her big apron, her sleeves rolled high, the spotless white of the garment that shows at the neck of her dress, the tidy cap under which every stray hair is carefully tucked. How different she looks with her simple dress and her wooden shoes from the women we are accustomed to see working!

It is morning, for the space between the house and the shed is still in shadow, but the sun shines on the sheep that we can see through the shed window grazing in the meadow. In the shed, too, we can just distinguish some one milking a cow.

As we look into the picture it seems to grow lighter and, in the dark corner behind the woman, we begin to discover jars and crocks on the shelves.

As the artist sketched the room the top shelf was even with his eyes; for we can see its edge only, though we can see the top of the one below it. A broom, not at all like the one we use, stands by the shelves, and a towel hangs at the door. Perhaps there is a basin on a bench just outside the door and the men coming from work pause to wash their hands and faces, then reach in for the towel to dry them.

Why does the woman smile? Does she hear all the lovely Summer sounds that come floating in through the open door? Is she amused at Pussy? Do you think Pussy knows the butter is coming? Can she see the three hens at the door, the boldest pausing, with head to one side and one foot raised, to see how far she dare

go? Is the woman waiting for the best moment to stamp her foot with its wooden shoe, to send the frightened hens scurrying out of sight?"

Some one in the class thinks that the light, round article hanging high on the wall near the doorway is a baby's muslin cap, and that somewhere out of sight the owner sleeps in a wooden cradle, lulled by the regular splashing of the churn dash; and the same little maid who discovered the supposed cap thinks that the mother smiles because the butter is coming while baby still sleeps, and that she is happy because there will be time for an hour with baby before father's early dinner must be prepared.

Whatever it is that brings that smile to her lips, Millet has made us feel that she is happy in her work; and looking at her we seem to hear the soft swish of the cream in the churn, the purr of the cat, and the drowsy croon of the hens, all mingling with the sounds that float in from the meadows to make the glad music of Summer.

CHAPTER V

COLOUR

ENJOYING THE SIX COLOURS IN THE SPECTRUM

Form I, Junior Grade, learned to classify colours as belonging to one or other of six families—the red, orange, yellow, green, blue, or violet family. When these pupils reach Form I, Senior Grade, they have become fairly familiar with these colours through making them with crayons or chalk or naming them when found in specimens and materials of various kinds. They should be given an opportunity now, to discover and enjoy these colours in the glory of that perfect purity in which they appear in the spectrum.

For this lesson, a sunshiny day, preferably one shortly after a rainbow has been seen, should be chosen. On the day of the lesson or some time previously, each pupil should arrange the six colours in their proper order in a row of squares or oblongs on a sheet of drawing paper, making each spot of colour as brilliant as the crayon or chalk will make it. When the row of colours is complete, if they have had the good fortune to see a rainbow recently, they should be led to talk about the colours that were displayed in it. The teacher should contrive to set them wondering where the colours in the rainbow came from and where they went when they disappeared.

When the pupils have been told that these beautiful colours are in the light all the time, and that they are revealed only under certain conditions, the teacher might ask the question: "How many would like to see the lovely spirit colours in the light, now?" Of course the desire to see them would be unanimous. They might then be shown the prism and allowed to examine it, while the teacher divulges the secret that this little three-sided piece of glass can be made to separate the colours in the light so that they can be seen in all their beauty. Then the prism should be suspended in a window in the sunlight, so that the glowing colours will appear on the opposite wall. If the wall is not white, a sheet of paper should be fastened on it for the time being, in such a position that the colours will appear on it. The pupils should then be allowed to point out the different colours, naming them and showing their relative position in the spectrum. They should also compare them with the brightest colours they have been able to make with their crayons.

LEARNING TO RECOGNIZE RED IN ANY OF ITS TONES

The teacher, standing before his class, says: "Let us see how many times we can find red in the school-room. Choose first the reddest red we can find here, the one most nearly like the red in the rainbow". Mary's hair ribbon is decided upon by the class. "Mary may come to the front and stand in the middle. The colour of her hair ribbon is what we call standard red. There are a great many other reds in the room but they all belong to the same family. We shall put all the light reds above Mary and all the dark reds below her, in a line."

The pupils pick out all those who have red in their clothing, and these go forward. After these are all at the front, those in the seats rearrange them in order from light pink to dark red. Those at the front also make suggestions as to where they should place themselves in the line.

Any colour may be taught in the way indicated, or the pupils may bring bright patches of silk, cloth, or pieces of paper to school and arrange them in order. Flowers or fruits may take the place of the patches. Other expedients will suggest themselves to the teacher.

In each case a drill should follow the classification. Where the pupils have been arranged at the front, they may take their seats according to their relation to some one in the line. For example, the teacher may ask those with a red lighter than Mary's ribbon but not light enough to be called pink, to take their seats; meanwhile those in the seats watch to see that no mistake is made. This sort of questioning is continued till all are in their seats.

LIGHT RED AND DARK RED

A lesson to follow the one already given might consist of a short explanation and demonstration by the teacher of the work to be done, followed by a seat exercise in which the pupils make three two-inch squares on a strip of drawing paper. The middle square is then covered with red, using the red crayon in full strength.

Over the square to the left a smooth, light layer of the crayon is rubbed, while over the third square is first put a light, even layer of charcoal, which is then covered by the red crayon used in full strength. The three squares, when finished, represent standard red, a light red, and a dark red.

The lesson is intended to prepare the class for the representation of simple flowers and fruit, where a lighter or darker tone than the standard is often required.

The other five colours should be taken up in a manner similar to that suggested for red.

MAKING ORANGE FROM RED AND YELLOW

MATERIALS

FOR THE TEACHER:

Strips of red and yellow tissue paper about 8″ wide.

FOR THE PUPILS:

Coloured crayons or chalks and 6″ by 9″ drawing paper.

METHOD

Teacher: "It was a great surprise to find the six colours—red, orange, yellow, green, blue, and violet, hidden in the light, and there are other surprises in store for us. Let us hang a strip of red tissue paper in the window at one side and a strip of yellow at the other side, so that the light will shine through each. Red by itself is just red, and yellow by itself is just yellow. Between the two we shall hang a strip of red and over it pin a double strip of yellow. The colour of the third strip is now neither red nor yellow. What is it? With your red crayon, on the left side of your paper make a strip of colour as smooth and even in tone as the tissue paper. On the right side make a yellow strip. Now between the two try to make the orange strip. Rub the red crayon on very gently, so as not to make a shiny, slippery surface to which the yellow will not cling. When you have an even, light red tone, go over it with an even coating of yellow. Hold your paper up now. Have you matched the colours in the window? Let us pick out those having the best orange strip and pin them up at the front."

MODIFYING COLOURS

The following may form a continuation of the lesson above or may be given as a seat exercise:

The pupils whose papers have been taken are given a fresh piece, the others turn the paper over and use the other side. Each makes with his orange crayon a square of orange in the middle of the paper, rubbing the colour on lightly but going over and over it till the colour is even in tone and as strong as it can be made. A similar square of orange but much lighter in tone is put on each side of the first square. A light tone of red is then put over the orange in the square to the left, and a tone of yellow over the orange in the square to the right. After this exercise in the modifying of orange, the pupils should be encouraged to bring some flower, fruit, or sample of material that will exhibit one of these hues of orange.

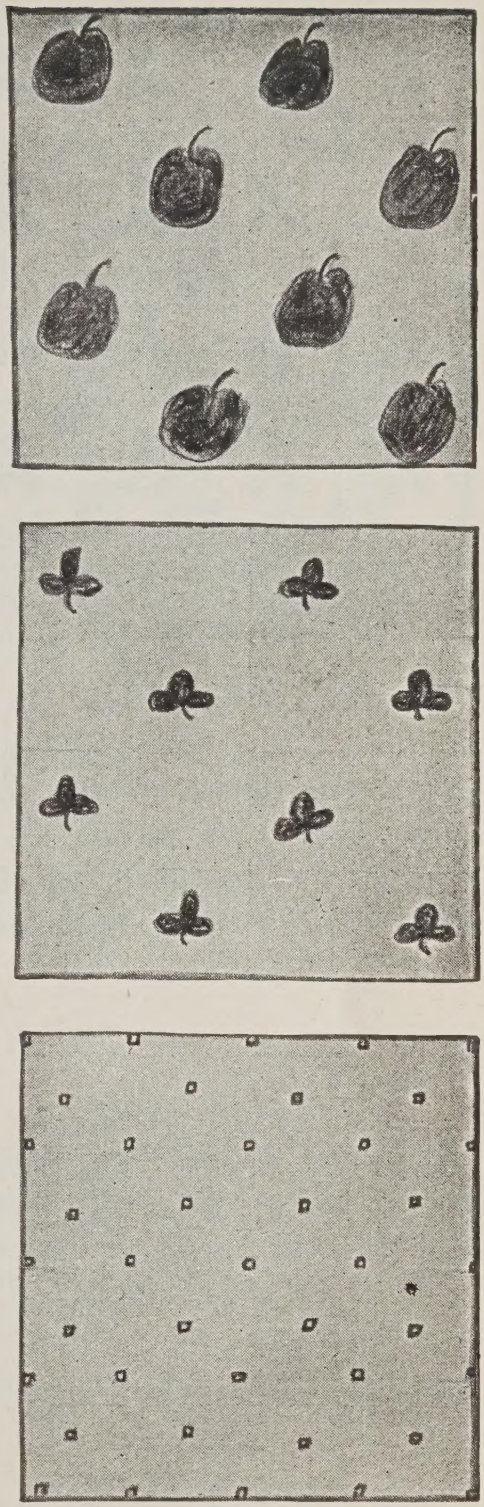
Having taught the six colours that appear in the spectrum and the making of orange, green, and violet as indicated in the foregoing lessons, no further lessons on colour need be given in Form I, as the representative work, especially from nature when coloured crayons are used, will increase the pupils' knowledge of colour through experience. The lessons in Design will also serve to familiarize them with the different colours.

None of the type lessons in colour should occupy more than twenty minutes, and they may be given as a change and relaxation between two heavier school subjects.

DESIGN

Units to be used singly, in borders, or in surface patterns, may be obtained in the same way in this Form as in Form I, Junior Grade. A little more latitude in the choice of unit may be allowed, as the power to repeat units regularly and keep them of the same size grows.

When the class is laying borders with small squares, oblongs, or triangles of paper, or with seeds, some members are sure to discover that one square may lap or be laid on top of another in such a way as to produce a pleasing unit. Three or four oblongs or three or four triangles may be grouped satisfactorily and the new unit repeated. Attractive units may also be made by grouping three or more seeds. Units made in this way should be finished with black and one colour. In some cases some of the shapes may be covered with black crayon. Other designs will look better if the coloured shapes are outlined with black. When a unit lends itself to such an arrangement, some part or parts of it should be left uncoloured, as this



SURFACE PATTERNS—BY FORM I PUPILS

UNIT PLACED IN THE CENTRE OF EVERY SQUARE, AND ALSO AT THE INTERSECTION OF THE CREASES

class may use black, white, and one colour in finishing their designs.

In Form I, Junior Grade, the class folded the paper in squares, to make a constructive plan to help them to space their units evenly in their surface patterns. The unit was then placed in the centre of each of these squares. The constructive plan is made in the same way in this class; but the idea of alternation is developed by having the class (*a*) place the units in every other square, leaving alternate squares vacant; (*b*) place the unit in the middle of every square in the first and third rows and on the line between the squares in the second and fourth rows; (*c*) place the unit in the centre of every square and also at the intersection of the creases. In the second arrangement, the difficulty of half shapes for the left and right edges arises; and in the third, the further difficulty of top and bottom halves, as well as quarter units for the four outside corners of the paper, has to be overcome. It may be necessary to have some members of the class separate the paper along one of the creases, or fold it under, to help them to understand how the half units should be drawn on the edges of the paper.

APPLIED DESIGN

FIGURED MUSLINS

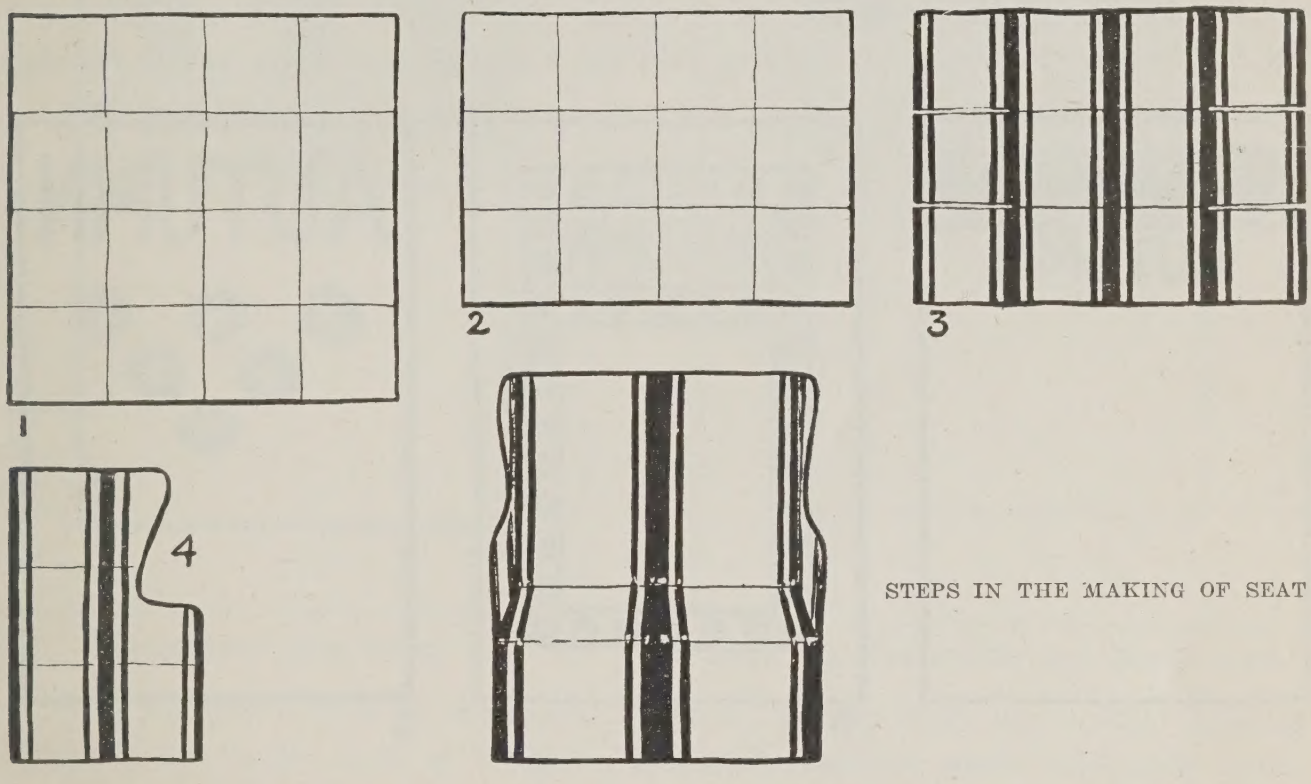
A delightful problem for the pupils is the putting of a surface pattern on plain white muslin. The pattern should be rather small and dainty, and before the crayons are used they may be sharpened. The really good results should be pressed with a hot iron. In the case of some crayons this will make the colours fast. If there is a school doll, the best figured muslin resulting from the lesson might be made into a dress for it. Only those who have previously made a successful pattern should be allowed to work on the muslin.

STRIPES

These may be used in the making of borders and surface patterns. Two or three stripes of different widths may be put around the edge of a square of paper

which is being thought of as a handkerchief. A similar border would be suitable for the edge of a tray, a box, or a basket, or for the ends of a towel, or a rug woven with strips of cotton or raffia.

Stripes also may be used in the making of surface patterns. This kind of decoration is particularly adapted for application to some of the paper or cardboard furniture, the making of which is an interesting exercise in construction for primary grades. For a seat such as the one in the illustration, two sheets of



STEPS IN THE MAKING OF SEAT

6″ by 6″ paper are required. The creasing of the paper and the placing of the stripes must be carefully done, so that the stripes in the back and in the seat will match. The sheet of paper which folds to form back and ends should have the stripes drawn on both sides. Only one colour should be used in the decoration.

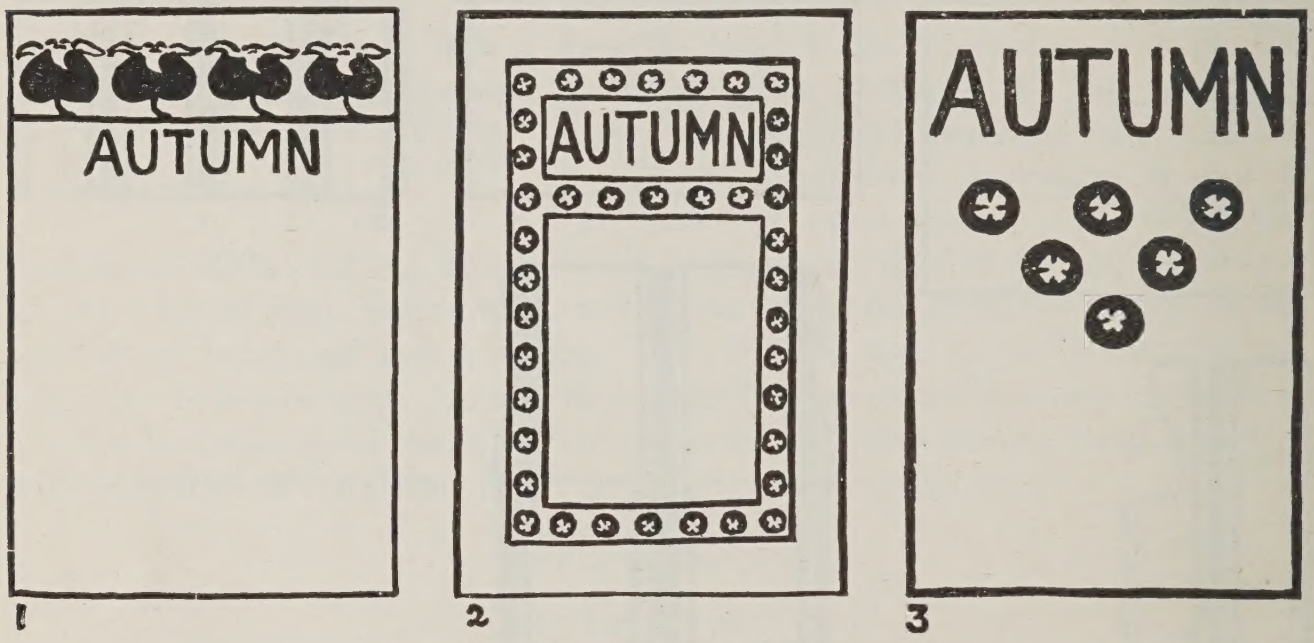
Steps to be followed in making and decorating the seat:

1. Fold and crease two sheets of paper, as shown in Figure 1.
2. Separate one strip from the side of each sheet. (Figure 2)
3. Draw the coloured stripes along the short creases and edges.
4. Cut along the creases at each end of one sheet, as far as the first crosswise crease. (Figure 3)

5. Fold the other sheet along the middle crease and cut both arms at the same time. (Figure 4)
6. Fold and paste the ends of the first sheet to form the box for the seat.
7. Place the other sheet in position and paste the back and ends.

OTHER PROBLEMS

The Autumn book cover illustrations show good placings for the title and suggest some ways in which a berry or similar unit may be repeated to decorate the front cover of a folder intended to hold the drawings made from nature during



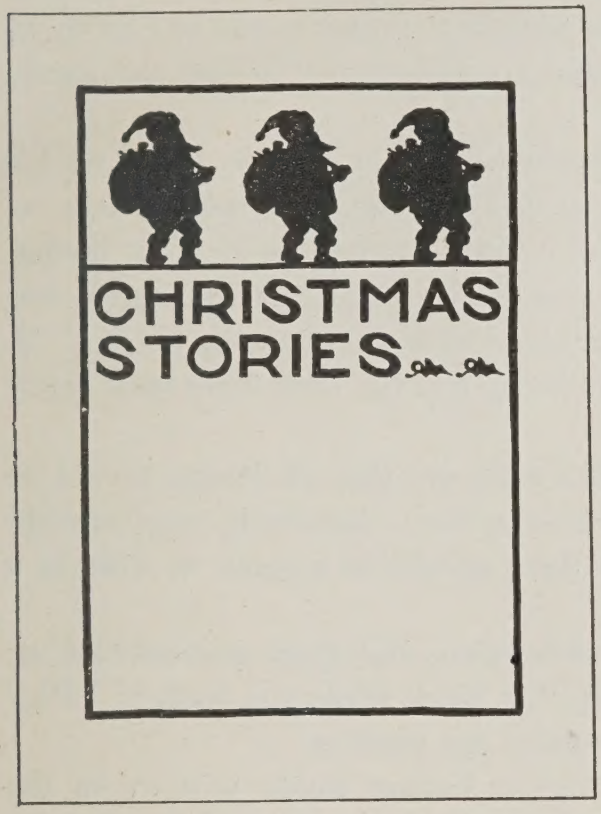
AUTUMN BOOK COVERS

September and October. The measurements may be made by marking the spaces on the cover from a sheet of the same size that has been folded and creased.

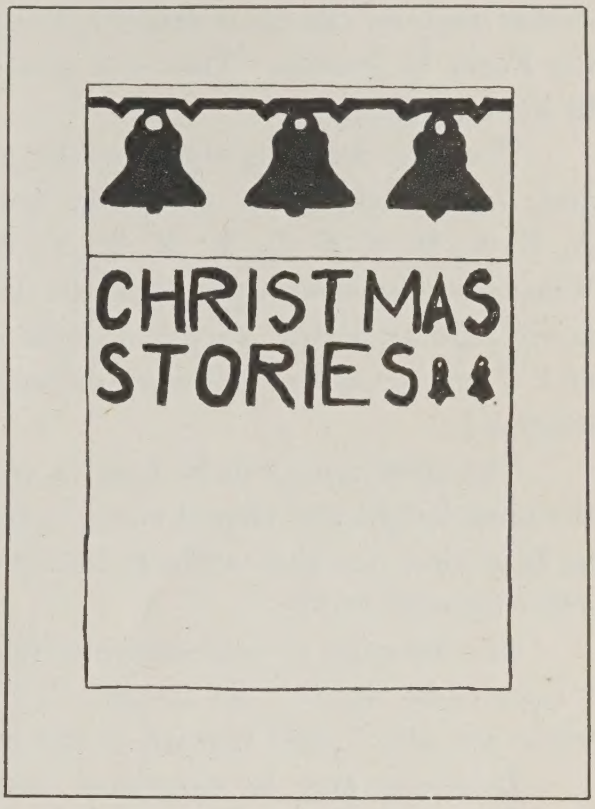
Christmas book covers may be made by cutting designs from coloured paper and pasting them in position. Another plan is to have each pupil cut out the best picture he can make of something appropriate to the season—a bell, a lighted candle in the candlestick, a Christmas tree, or even Santa Claus—to use as a pattern in tracing a border or other arrangement of the unit, which may then be coloured. In work for a special occasion such as Christmas, the teacher may give a great deal of help to the pupils by making mass drawings on the black-board.

Valentines, such as those illustrated, are easily made from paper by folding

and cutting. The small hearts, Figures 2 and 4, may be cut, traced, and coloured with crayon; or small heart-shaped seals may be used. Coloured crayons are used for the other decorations and for the lettering.

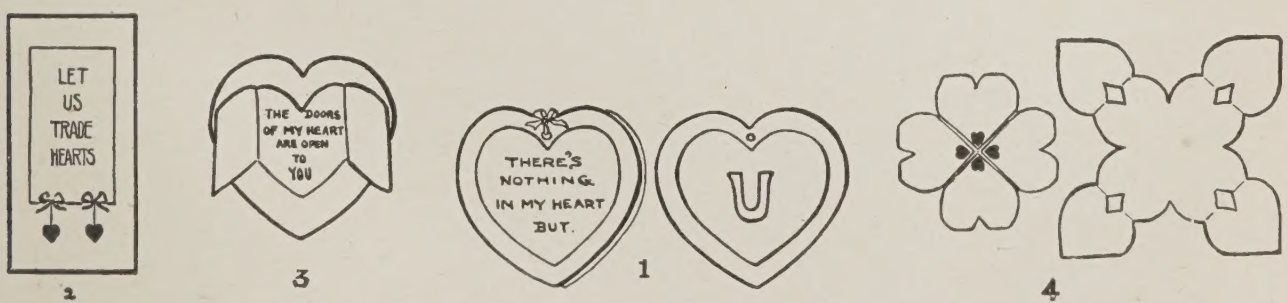


CHRISTMAS BOOK COVER



CHRISTMAS BOOK COVER—BY A FORM I PUPIL

Simple flowers such as the crocus, daffodil, or tulip make appropriate decorations for an Easter card or booklet. Coloured drawings made previously from nature by the pupils may be cut into rectangles of suitable size and pasted under the lettering after the rectangle has been outlined, or freehand cuttings from the flower may be utilized in the same way.



VALENTINES

LETTERING

As soon as possible, the pupils should be required to put the name and date on all drawings. For this purpose, lettering is better than script. The teacher should keep on the black-board a straight line alphabet similar to the one given in the Form II lessons. This will give each pupil an opportunity to find the letters in his own name.

The first lettering done by the pupil should be laid by him in sticks on his desk and then drawn on paper with lead-pencil or crayon. Such letters as A, E, F, H, I, K, L, M, N, T, V, W, X, Y, Z, lend themselves to stick laying. When these have been practised till the class as a whole can make them legible and fairly regular, letters having upright bars combined with curves as B, D, J, P, R, and U may be taken, the more difficult letters being left till these have been fairly mastered.

The chief points to be kept in view in this class are that all letters should be the same height and should stand upright in an even line. Letters in words should be kept close together without touching, and there should be a space as wide as a letter between words.

The lettering of each drawing, the titles of booklets, and short mottoes such as, "Dare to be true", "Be on time", "Be polite", "Work while you work", "Play while you play", will furnish plenty of opportunity for practice.

Lettering may be correlated with spelling by having words written on the black-board by the teacher translated into lettering by the pupils. Only straight line capitals of the simplest formation possible should be made.

CHAPTER VI

FORM II, JUNIOR GRADE

ILLUSTRATIVE DRAWING

COASTING DOWN HILL—BY A FORM II PUPIL

Before taking the Illustrative Drawing in Form II, the teacher should read the suggestions regarding its use in Form I, Senior Grade. Here, as in that Form, it can be made of great assistance in the teaching of other subjects.

For the special lessons in illustration, the pupils will enjoy fairy tales and stories such as those mentioned for Form I, Senior Grade. Stories full of action without gruesome details are best.

When anything with which the pupils are quite unfamiliar forms a part of the story, a number of pictures of it should be cut from newspapers or magazines, mounted, and put up for study around the school-room. The aim in the case of an unfamiliar animal, for example, is to give each pupil a general idea of its characteristic shape and attitudes, so that each is equipped with an image which will help him to express his vision of the story. Where Illustrative Drawing does not develop individuality, it may be taken for granted that some mistake is being made in the method of teaching it.

Stories that deal with things beyond the pupils' comprehension should never be given. It is a safe rule to give only those stories which a pupil can live through in his own imagination.

Up to the present, the chief aim has been to secure freedom of expression and at the same time to stimulate the observation of form. Form II classes should begin to exhibit a finer sense of form in their drawings but, if too great a stress is put

upon accuracy, the drawings are likely to be lacking in spontaneity. This difficulty may be avoided, to a certain extent, by correlating the other lessons in drawing with illustration. A lesson in which a pupil has been posed and drawn in some interesting position may be followed by the illustration of a game or story in which that particular pose would naturally form a part. Take for example the lesson on page 127. The class has some time previously been observing a game of hockey, and a boy is posed with a hockey stick, after which the pupils make a picture from memory of a characteristic pose. The next game of hockey each pupil observes will leave a mental picture more vivid because of the effort he has made to depict this pose and, if the next lesson in drawing be the illustration of a game of hockey, the results are likely to be good.

The pose may be made to determine the lesson in illustration, or the teacher, desiring to have the class illustrate a certain game or event, may plan to take in a previous lesson a pose that will be required in illustrating it.

Charcoal, ink, and coloured crayons are the best mediums to use in illustrative work in Form II, Junior Grade. The drawings done in charcoal should be taken home; those in ink or coloured crayons may be preserved in the pupils' portfolios.

REPRESENTATION

DRAWING FROM FLOWERS

The method of teaching drawing from flowers in Form II should differ but little from that used in Form I. Up to the present, much attention has been paid to the position of flower and leaf masses in relation to each other and to their differences in size and shape. In Form II, Junior Grade, while the above-mentioned properties of the specimens are still kept in mind, emphasis is also placed upon the character of growth. The habit of comparing the drawing with the specimen after each step in the drawing of it, should be formed. A lesson may be divided advantageously into the following steps:

1. Distribution of the materials
2. Class study of the specimen
3. The placing of the faint direction line on his sheet of paper, by each pupil
4. The drawing of the flower masses
5. The drawing of the leaf masses
6. The drawing of the stem wherever it is not hidden by leaves

7. The correction of any mistakes wherever it is possible without erasing, after a final comparison in which the paper is held off from him by the pupil in such a position that he can readily look from his drawing to the specimen to note every point in which he has failed to represent it truthfully.

The larger part of the work in Representation done in Form II, Junior Grade, should be expressed in charcoal, black crayons, or coloured crayons. A beginning may be made in the handling of the new medium, brush and ink, which should be taken up more thoroughly in Form II, Senior Grade.

PURPLE ASTER IN COLOUR

(Time, twenty to thirty minutes)

AIM

To get each pupil to see and express to the best of his ability the growth, shape, and colour of the particular specimen of purple aster that he is studying.

MATERIALS

For the Teacher:

Coloured chalks.

For the Pupils:

On each desk a box of coloured crayons and a sheet of 6″ by 9″ paper—one good specimen of purple aster with long stem and leaves for at least every three or four pupils.

METHOD

The teacher holds up a purple aster before the class and asks: "How many know the name of this flower?" Several hands are held up and vibrate with the eagerness of the owners to answer. The name being given, he asks: "How many different parts do you see?" The answer is obtained: "Three—flower, stem, and leaves". From the class is also drawn the information that we tell these apart by difference in colour and shape. "But how could a blind man tell a piece of the flower from a piece of the leaf?" Some one suggests that it is by the feeling, and the class is told that this feeling is called "texture".

"Can we make a picture of the aster that will show difference in colour? In shape? In texture? The class is not quite sure about texture, so the teacher, with a piece of chalk, represents on the black-board a smooth surface by even strokes, a rough surface by uneven, broken strokes, a fine, bending stem by a light, curving line, and a thick, strong stem by firm, heavy strokes.

"What else must we think about before we can make a truthful picture of the aster?" Some one suggests the position of the leaves on the stalk. Some one else calls attention to the difference in size of the leaves; another, to the difference in shape of those near the blossom. The difference of the green of the stalk from the green of the leaves is noted, as is also the trace of dark red or of violet on one side of the stalk. The teacher himself calls attention to the shape of the petals and the way in which they radiate from the centre.

All now make a rapid trial drawing of the blossom alone, on the wrong side of the paper. Meanwhile, the teacher notes mistakes—probably petals too thin, and in their radiation suggesting a whirlwind rather than a star. The way to correct these mistakes is shown rapidly on the black-board, another quick attempt is made, the papers are turned over, and each pupil is cautioned to watch his own particular specimen and tell the truth about it. They then proceed to draw it as they did the grass in the lesson on page 51, first, the light direction line of the stem, then, a light direction line for each leaf, next, the beautiful blossom and the leaves. Last of all, the sturdy stem is strengthened between each pair of leaves and its colour carefully matched.

During the lesson, each pupil as he works constantly compares his drawing with the specimen he is trying to represent. At the end of the lesson the best drawings are placed in a row at the front.

THE USE OF WET PAPER

Some teachers prefer to have the pupils work on wet paper and, when the crayons are free from wax, some astonishingly good drawings are secured in this way. With dry paper, the drawings are less the result of accident than of careful effort, and on that account dry paper is to be preferred.

When wet paper is to be used, each pupil lays the paper on a slate and passes a very wet cloth or sponge lightly, first over the wrong side and then over the right, smoothing the paper out on the slate.

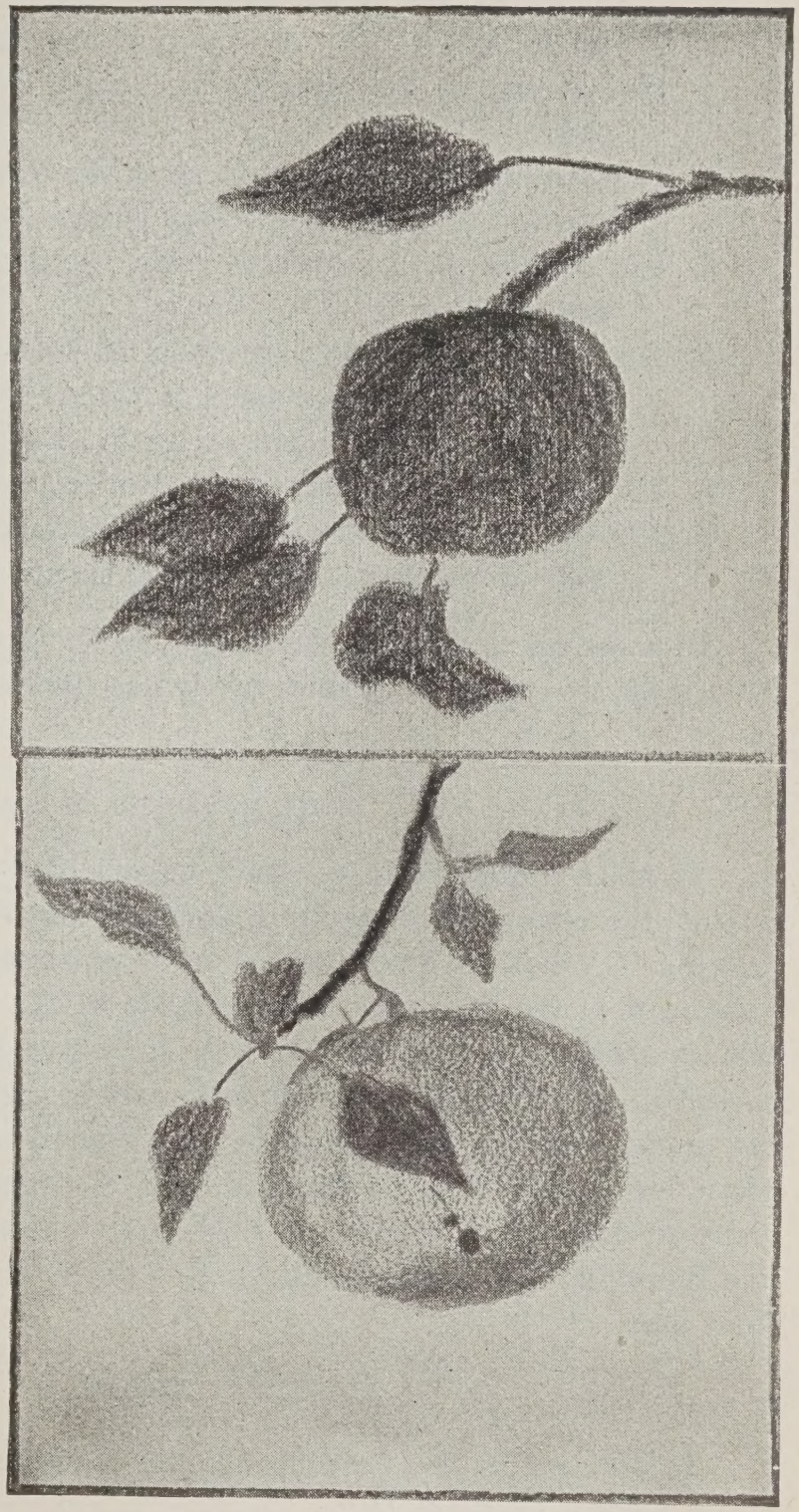
When the paper ceases to glisten, it is ready for the drawing, and this is made in exactly the same manner as with dry paper.

FRUIT ON THE BRANCH

For a Form II, Junior Grade class, very simple specimens should be chosen, such as a twig or small branch with an apple, pear, or plum, and two or three leaves, or a pair of bean pods on the stem with a single spray of leaves. Rose hips, haws, poppy heads, and other seed pods also make interesting drawings for this class. The first efforts may be made with charcoal or with black crayons.

When a lesson on the drawing of fruit is to be taken, the teacher should see that there are ready a sufficient number of specimens pruned of all leaves that add to the difficulty but not to the beauty of the specimen. The order of the lesson may then be as follows:

1. The arranging of the specimens (See General Introduction.)
2. The placing of a sheet of drawing paper and charcoal or black crayon on each desk



CRAYON DRAWING OF FRUIT—BY FORM II PUPILS

3. The studying by each pupil of the specimen which he is to draw, aided by questions put by the teacher as to the direction of the twig, fruit, and leaves, and the size and shape of these in relation to each other
4. The placing on his paper by each pupil of the faint direction line of the twig
5. The placing of faint lines to show the direction in which the fruit hangs and in which the middle line of each leaf points
6. The drawing in mass of the fruit, being careful to get it truthful in size and shape
7. The shaping out of the leaves on each side of the middle line already placed for each, care being taken to make them not only correct in shape but of the right size in proportion to each other and to the fruit
8. The drawing of the stem where it is not hidden by the leaves
9. A final, careful comparison with the specimen, followed by any corrections that can be made. No erasing should be attempted.

In a second effort, the class might endeavour to show which of the three—fruit, stem, or leaves—is darkest and which lightest. (See illustrations.)

FRUIT IN COLOURED CRAYONS

To make a drawing in coloured crayons of a specimen similar to the one just treated, the same method may be followed in almost every particular. A faint mass drawing in yellow or green, according to which of these colours seems to be most prominent in the fruit, may first be made of the whole specimen, after which the colours showing in the fruit as red, or deeper green, or yellow, may be softly rubbed in place over the green or yellow mass, each stroke following the surface of the apple, until its appearance is satisfactorily represented. The colour of the green leaves may then be matched, and the stem strengthened with brown and violet strokes, till its colour and shape are obtained. In the case of a violet fruit like the plum, the first mass drawing of the specimen would require to be made a faint blue.

TREES

The lessons on the drawing of trees given in Form I, Senior Grade, will be found helpful in Form II.

FIG. 1.

FIG. 2.

THE MAPLE TREE IN COLOURED CRAYONS

(Autumn appearance)

AIM

To teach the class to observe, appreciate, and try to express the beautiful appearance of the maple tree in Autumn.

PREPARATION

Choose a time when the trees are most beautiful in colouring, before the leaves have begun to fall to any great extent. Do not worry very young pupils by talking of the different varieties but call their attention to the finest maples in the neighbourhood. Speak of the general shape of the maple as compared with other trees, the firm, straight trunk, the strong limbs that grow out of it, and the glorious colour of its foliage in Autumn.

Allow a day or two for this study, during which time the pupils are kept reminded (possibly through some other school subject) of the trees. Permit them to draw maple trees on the black-board during recesses.

If the lesson is to be in the afternoon, take a few minutes before noon to stand at the black-board, chalk in hand and, drawing a light, vertical line about two feet long, say: "You are going to tell me how to draw a maple tree just this high. How much of the height should be trunk? How wide should the trunk be for the height? How many big limbs could you see in the trees you studied? In what direction did they grow? Where shall I make the tree widest? How can I make the foliage?

I shall try first over here on the black-board. Does this up-and-down stroke look like it? No, it is too much like pine needles, and this curly stroke where it is thick is too much like wool, and like shavings where it is more open. How many think this zigzag stroke looks best? Let us try it. What colour shall I use first? What colours did you see in the maple trees? Red, yellow, orange, green, brown.

Was the red like the rose or like the poppy? A poppy red, then it had yellow in it, and so have all the other colours that we see in the maple foliage at this time of year".

The teacher then begins to make the foliage with yellow chalk, shaping out the whole mass of foliage lightly with a zigzag stroke. "Should I make the outside edges as close as the centre of the tree, or do the tips of the branches make the outline look uneven or ragged?"

When the light, blurred mass of yellow is complete, the pupils suggest the placing of the different-coloured boughs, and the orange, red, green, and brown are softly blended, with the same zigzag stroke, into the yellow mass. The trunk and the bare limbs that show beneath or through the foliage are then put in firmly with the purple and brown or black crayons. A few irregular up-and-down strokes of green at the base of the tree suggest the grass, and the picture is completed.

The tree is then erased before the pupils return, so as not to interfere with the mental image of the particular tree each pupil has been studying.

MATERIALS

A box of coloured crayons containing the six standard colours and black and brown, and 6″ by 9″ drawing paper on each desk.

METHOD

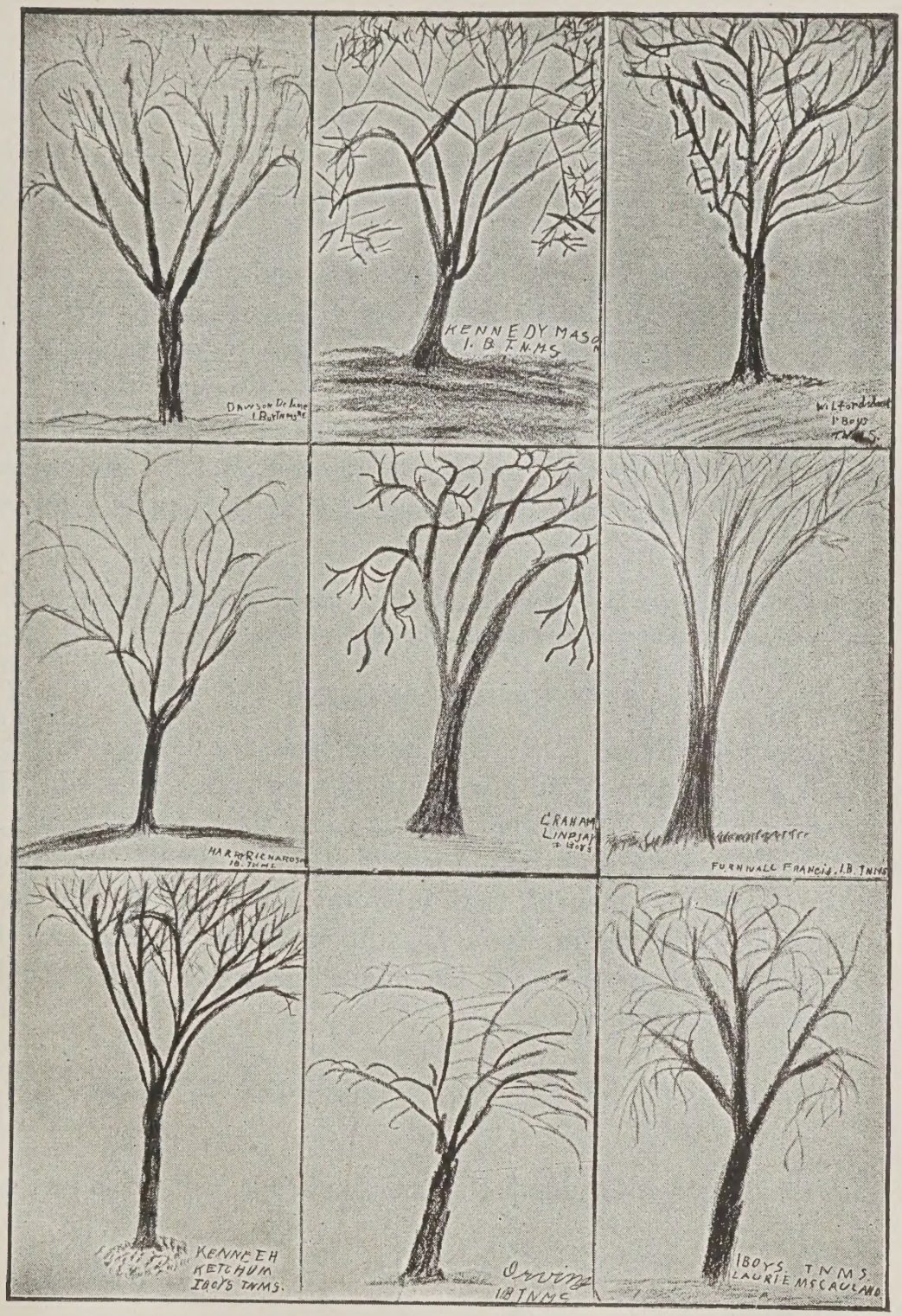
The teacher, standing in front of the class, gives commands or asks questions as follows: "Place the paper in the best way. First draw the direction line so lightly that it looks like a whispered line. How high is the tree to be? Show me with your hands how wide you are going to make it on your paper. How much is to be trunk? Hold up the crayon with which you are going to begin making the foliage. Use it very lightly, so that the other colours will show over it."

The pupils then continue sketching the tree, constantly pausing to compare their drawings with their memory pictures of the tree, and the lesson is closed in the way indicated in former lessons.

WINTER APPEARANCE OF THE ELM TREE

Although, so far in the Manual, a different tree has been taken in almost every lesson in order to give the teacher, whatever his environment, as much help as possible, it is perhaps advisable to teach but one or two trees in each Form, studying them under all conditions.

The elm trees illustrating this lesson were drawn by Form I boys. These boys had been studying the elm tree for a few days and had already drawn the tree once. They were allowed to take these first drawings home, so as to compare them on their way with elm trees that grew just outside the school yard. During the



WINTER APPEARANCE OF THE ELM TREE—BY FORM I PUPILS

second lesson, as the pupils worked with black crayons, the teacher passed round the room, noting mistakes, sending one boy to a window with his drawing to compare it with the elm trees which could be seen from the school windows, to ascertain whether his branches grew out of the trunk in the right way; another to compare the trunk in his drawing with the elm trunks; another to note the shape of the upper part.

During the lesson, which was very orderly because the boys were intensely interested in what they were doing, nearly every boy out of the fifty or more in the room had compared his drawing with the real tree and corrected his mistakes. There were three pupils at each of the two windows most of the time.

The poplar tree had been studied a short time before; note the branching of the poplar, in one side of the third tree in the top row, and the improvement after the boy who drew it had compared his drawing with the elm tree to correct the branching.

NOTE.—The average drawings resulting from a lesson on trees given to a Form II, Junior Class, should be quite equal to those in the illustration.

LANDSCAPE DRAWING

It was shown in Form I, Senior Grade, how the teacher might draw a landscape by a method that would give the pupils assistance in producing certain effects with their crayons, and would, at the same time, teach them to observe the appearance of sky, earth, and trees in winter at sunset time. The same method, although to a less extent, may be used in Form II, Junior Grade, because the lessons in landscape drawing in Form II, Junior Grade, as in Form I, Senior Grade, are designed primarily to aid the pupils to express their thoughts more clearly in Illustrative Drawing.

A SUMMER LANDSCAPE IN COLOURED CRAYONS

AIM

To teach the drawing of a simple Summer landscape, using coloured crayons.

MATERIALS

FOR THE TEACHER:

Coloured chalks and a large sheet of drawing paper fastened up in full view of the class.

For the Pupils:

Coloured crayons and 6″ by 9″ drawing paper.

METHOD

Introduce the lesson by asking if any of the pupils have rambled through the fields on a sunny day in the Summer vacation, or have gone to the woods or the park. Let them describe the Summer colouring—bright blue sky above, lighter near the earth, fresh green fields, dark green woods, blue-green in the shade, deepening to violet.

On the white sheet of paper before the class demonstrate the method of drawing the landscape, using coloured chalks. Each pupil may then draw on his paper with the black crayon a rectangle for his landscape, leaving a margin of an inch all around it. Next, he may draw across the rectangle a light blue line, to mark how much of this is to be sky and how much earth. He may now rub the blue crayon lightly over the part for the sky, until he has made it an even tone of blue. The crayon should be held under the hand, so that the side of the point touches the paper and produces a faint, broad stroke which may be gone over and over until the depth of tone required is produced. In a similar way, level strokes of green crayon laid close together may be made to represent the grass-covered earth. The mass of woods showing against the sky in the distance may be represented by zigzag or up-and-down strokes of green, modified by the blue crayon to give the effect of distance.

A little violet rubbed into the lower edge of the woods will give the deep shadow under the trees. If yellow crayon be rubbed softly over the green of the field or meadow, a more spring-like effect will be obtained.

The pupils should be encouraged to look for views of this kind in the neighbourhood and note the changes made by weather and season.

ANIMAL STUDY

The method suggested for teaching the drawing of animals or birds in Form I, Senior Grade, may be pursued also in Form II. The pictures made by pupils to represent animals in their illustrative drawings are usually inferior to their pictures of children and trees. A few lessons on the drawing of animals will help them to get clearer mental images and will lead to improvement in their illustrative work.

ANIMAL STUDY

Successful memory drawings have been made of large animals, as a pony, a cow, and a goat, which were brought at different times to the school yard and studied there by different classes.

Charcoal is the best medium to use where numbers of sketches showing different positions of the animal are made; but where a single representation of some characteristic pose is made from memory after careful study, an ink painting, or silhouette, of the animal is a more desirable kind of representation.

DRAWING FROM THE FIGURE

For suggestions with regard to drawing children see the text for Form II, Senior Grade.

OBJECT DRAWING

FROM MEMORY

The first object drawings made in a Form II class should be drawn in mass and from memory, after class study in the manner described in the Form I text.

Some of these memory drawings may be made with charcoal or black crayon, but the greater number of object drawings made in this Form should be expressed in ink mass.

FROM THE MODEL

Thus far in the child's school life, very little drawing has been done directly from the model. By the time he has reached Form II, Junior Grade, the average pupil has arrived at a stage of development where a definite effort should be made to get him to draw from the object rather than from his memory of it, therefore, although drawing from memory should not be dropped, increasing emphasis should be placed upon drawing from the model.

A Form II class should not have to struggle with problems in foreshortening. Objects presenting difficulties of this kind should be placed definitely at the eye level or above it, in such a position as to obviate the necessity for dealing with foreshortened surfaces. Many objects may be obtained which do not show foreshortened surfaces or are of such a character that the pupils draw naturally from the appearance rather than from their knowledge of the form. Among these are a closed umbrella, different kinds of hand-bags, oil-cans, and cylindrical lanterns.

When one large object or a sufficient number of smaller objects have been so placed that each pupil has a good view, he must decide how he should place his representation of the object upon the paper and how large he can afford to make it in order to have it look well. He then dips his brush in the ink and draws a line to indicate the height he intends to make his ink painting. Upon this central line he builds his picture, shaping the main part out on each side of it, constantly comparing his painting with the object, until he has the proportion of width to height and the contour correct. When the main part of the object is satisfactorily represented, the proper placing of minor parts, such as spout and handles, is determined upon, and these are shaped out from the main part.

PICTURE STUDY

THE SHEPHERDESS—LEROLLE

THE ARTIST

Henri Lerolle, a modern French artist who died very recently, was born in Paris in 1848. He was a wealthy man and not in any way obliged to make a living by his brush, so he painted just what he wished and when he wished. At first he chose landscapes for his subjects, but his later pictures were of peasant life. Of these, the most popular are probably *The Shepherdess,* which is now in the Luxembourg Gallery in Paris, and *By the Riverside,* which is in the Museum of Fine Arts, Boston. *The Arrival of the Shepherds,* a beautiful picture of the Nativity, is also a great favourite.

Lerolle seems to have made very clever use of ideas gleaned from other noted artists of his day, among them Millet, about whom we learned in Form I, Senior Grade. His paintings, however, are not as striking nor as vigorous as the works of these artists, but they are carefully thought out and full of a clear, soft light that is very beautiful.

THE PICTURE

The method used in studying this picture with pupils in Form II, Junior Grade, should be very similar to that used in Form I, Senior Grade. They should be given an opportunity to study the picture and talk about it among themselves before it is taken up in class. Some of the questions that may be asked to discover how much they have gathered from it and to lead them to go back to it with fresh interest are as follows:

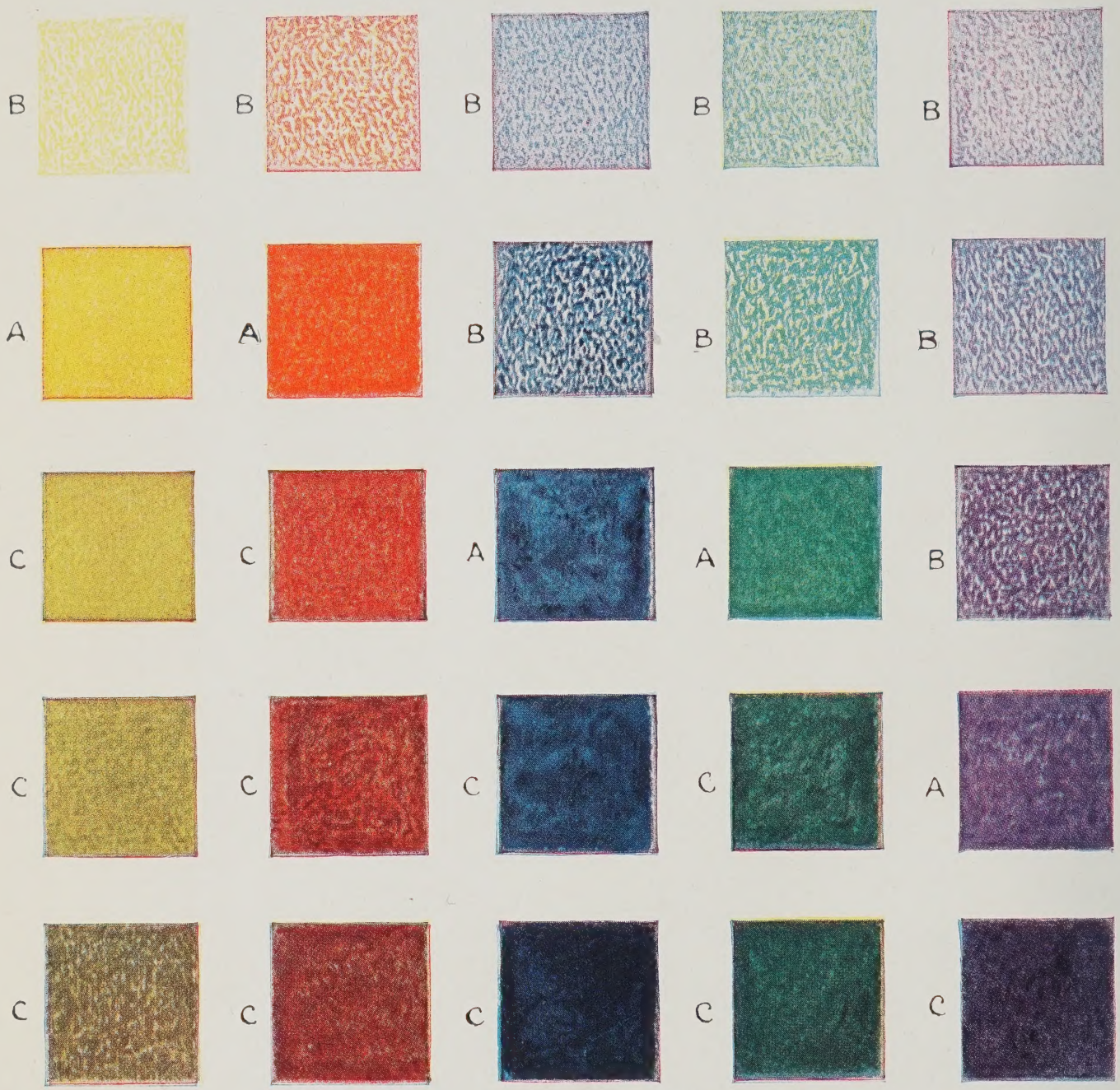
"What do we call a number of sheep feeding together as these are? What is a shepherdess? Where is she taking the sheep? Do people care for animals in this way in Canada? Why not? Is the woman dressed as Canadian women are in the country? In what ways is her clothing different? Is the day warm or cold? What leads you to think it is warm? What time of year is it? Would the foliage on the trees be heavier if it were the middle of Summer? From their smooth, peculiar bark would you judge the trees to be maple or beech?

What work is being done just behind the trees? What can be seen in the distance to the right of the picture? To the left? How has the artist made these things seem so far away? Is it clear or hazy in the distance? Why do the sheep not spread out over the grass so as to have more room? Do they seem to be hungry? Do sheep often arrange themselves in rows, cropping with their heads in a line as we see them in this picture? Why has the artist such a wide space in front of them, when some of the flock seem to be left out of the picture? Can you see the wool on the nearest sheep? Why is it not shown so clearly on the backs of those that are farther away?

Is the woman leading the sheep or driving them? Is she fond of them? Is the pasture good? Can you see any place near, where the sheep might drink if they were thirsty?

Why does the woman not wear a hat? Is she in a hurry? Does she look bright and alert, or patient and easy-going? Is there anything in her occupation to make her appear thus? Does she seem interested in what is going on around her?"

The answers given by the pupils may open up a different line of thought. They should be allowed to express their ideas respecting the picture quite freely so long as there is something in it upon which they have based their opinions, but idle conjecture should be discouraged.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CHAPTER VII

COLOUR

TINTS AND SHADES OF COLOUR

THE COLOUR work assigned to Form II, Junior Grade, is a continuation of the work already taught in Form I, Senior Grade. In that Form the pupils learn to make a lighter and a darker tone than the standard of each colour. In Form II, Junior Grade, they should learn that the tones of a colour lighter than the standard are called tints and those that are darker are called shades. They should also learn to make five tones of each colour including the standard. In doing this they are really learning to make scales of values, although they are not expected to show a regular gradation of steps, nor are they taught to speak of these tones as values until they reach Form III.

To make a scale of five tones showing the standard colour with some of its tints and shades, a vertical row of five squares, each an inch in size and about a quarter of an inch apart, should be arranged by each pupil on his sheet of paper. Excepting in the case of yellow and violet, the middle square should be chosen for the standard, and over its whole surface the crayon should be rubbed firmly, until the colour is as smooth and as strong as it can be made. In the square next above, the crayon should be rubbed lightly over the surface, until an even tone is produced which allows the white paper to shine through sufficiently to make the colour appear lighter than the standard. In the top square, a still lighter tone should be made. If the pupils have been taught to hold the crayon loosely under the hand, they will have no difficulty in making a light, even tone.

To produce two shades of the colour, a light gray tone of charcoal should be rubbed over the square immediately below the standard and a deeper gray tone over the bottom square. The crayon is then rubbed firmly over these gray tones until they are covered with a layer of colour as strong as it can be made.

In the case of yellow which is very light, the standard colour should come in the second square, so as to allow for three shades and only one tint. Standard violet, which on the other hand is dark, should be placed in the fourth square in the row, so as to allow for three tints and only one shade.

In the illustration, the standard colours are marked (*a*), the tints (*b*), the shades (*c*).

The shades of yellow are greenish in tone and the shades of orange are brown.

An even gray tone may be produced by rubbing the black crayon lightly over the paper in the same manner as the coloured crayons were used in producing different tints of colour.

DESIGN

A Form I pupil is expected to make little if any use of the ruler in Design, except possibly for some very particular purpose, such as Christmas work. In Form II, Junior Grade, he should learn to measure in inches and should be able to mark off the paper in inch squares using light pencil lines.

In Form I, more attention was paid to the keeping of the units equal in size and spacing them regularly than to the shape of the unit itself. The pupil should now learn that units may be too large or too small to look well in the spaces in which they are repeated. He should also begin to simplify units. An excellent plan for teaching him both to simplify the unit and to judge of the best size to use, is to have him cut it from a piece of paper of the same size as the space to be occupied. It may be cut from coloured paper or coloured with crayon, so that he can see it distinctly when it is laid on the space prepared for the unit in the constructive plan and can judge whether it seems to crowd the space or be too small for it.

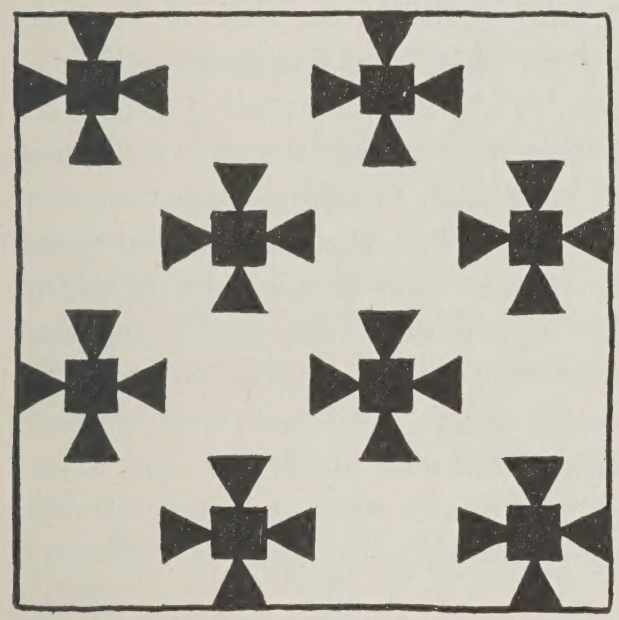
When a constructive plan of inch squares has been drawn on a sheet of paper in preparation for a surface pattern, one row of squares may be cut from the paper, leaving it 6″ by 8″ in size. This strip will, when cut into squares, give the pupil six squares with which to experiment. Three of these might be used in getting a unit good in shape, leaving the other three to be used in determining the size that will look best.

LEAVES AND FLOWERS IN DESIGN

A collection of rather small leaves, such as the lilac, myrtle, poplar, clover, shamrock, or other leaves as simple in shape, should be brought to school, so that each pupil may have at least one on his desk to use as a model. He should draw this in mass with black or coloured crayon as near the middle of his inch square as possible. The square should then be folded down the middle to divide the leaf in half, and the smaller half should be cut around, so that when the leaf is opened out both sides will be alike. The pupil may also get the unit by folding the paper and cutting from the natural leaf without previous drawing.

The side view of the rosebud, buttercup, apple blossom, etc., and the top view of such flowers as the buttercup, shamrock, begonia, wild rose, lilac, hyacinth, cherry blossom, sweet syringa, and phlox, may be treated in the same way. Where all the petals of the flower are of the same shape, the inch square may be folded in quarters before the top view is cut. In Design, as long as the general shape of the flower is kept, all the separate parts need not be shown. It is often advisable to reduce the number of petals.

When the pupil has cut a satisfactory unit, he may use it for a pattern, placing it in the middle of each square of the constructive plan or in alternate squares



UNIT REPEATED IN ALTERNATE SQUARES

UNIT REPEATED IN EVERY SQUARE

according to its size and tracing around it. If there are not more than six repetitions of the unit, he should be required to draw from the pattern unit instead of tracing it for each repetition, so as to give him practice in judging size and shape.

Simple geometric shapes similar to those obtained in Form I by grouping small squares, oblongs, or triangles of paper may be used by this class for borders and all-over patterns. Some geometric units, when they are repeated in every square, form background shapes that are very attractive; others, to look their best,

must be repeated in alternate squares. A Form II pupil should decide which arrangement is the better one for the unit he has made, before he repeats it.

Some of the objects drawn by the pupils in the lessons in Representation make appropriate units for special purposes. The teacher should plan to have objects that may be made use of in Design drawn on small pieces of paper, so that when they are cut out they will not be too large to be used. A tea-kettle, tea-pot, or jug, would make a suitable unit for the cover of a booklet containing the story of a picnic or tea-party. Drawings from animals or birds may be used in the same way. A rabbit, a chicken, or a duckling, may be used for Easter, and a toy camel will furnish a good unit for a border to go above or below the title of the story of the Wise Men, for a Christmas booklet. Other objects may be used with equal appropriateness for these or for other occasions.

The pupil should be taught to realize that, no matter what the unit is, it must be arranged in an orderly way when it is used in Design. Children may run, play, and shout when they are at their games out-of-doors, but when recess is over and they are summoned to the school-room, a very different sort of behaviour is seemly. In the same way, flowers, animals, and other objects, when they are represented, may be shown in a perfectly natural way just as they appear, but the moment they are made into designs for the decoration of some article, good taste requires them to be arranged according to some regular plan. The same uniformity and unison in movement that makes us enjoy seeing drills and dances when they are well done must be apparent in the arrangement of the units that are used in Decorative Design, if the result is to be satisfactory.

CONSTRUCTIVE PLANS

As has already been indicated, Form II, Junior Grade classes should learn to use their rulers to mark off the paper in inch squares with light pencil lines for the regular spacing of units that are to be repeated. They may also use a constructive plan obtained by folding and creasing the paper into sixteen equal oblongs. When many repetitions of a small unit are desired for a surface pattern, a better method is to have the pupils measure from the top of the sheet of paper, making a row of dots an inch apart on the edge at each side. The ruler may then be laid across from edge to edge and kept straight by means of these dots, while other dots are placed an inch apart across the paper in regular rows from top to bottom. When the pattern is to be repeated in straight rows, the dots in each row are placed exactly under

those in the row above. When an alternate arrangement is desired, the ruler may be moved a half-inch to the left in every other row so as to bring the inch mark, where the dot is to be placed, exactly under the middle of the space between the dots in the row above. The unit may then be drawn or traced at each dot. This is a rapid method of obtaining regular repetition and may be used in any class from Form II upward, when it is desirable to cover a large surface with many repetitions of a unit in a limited time.

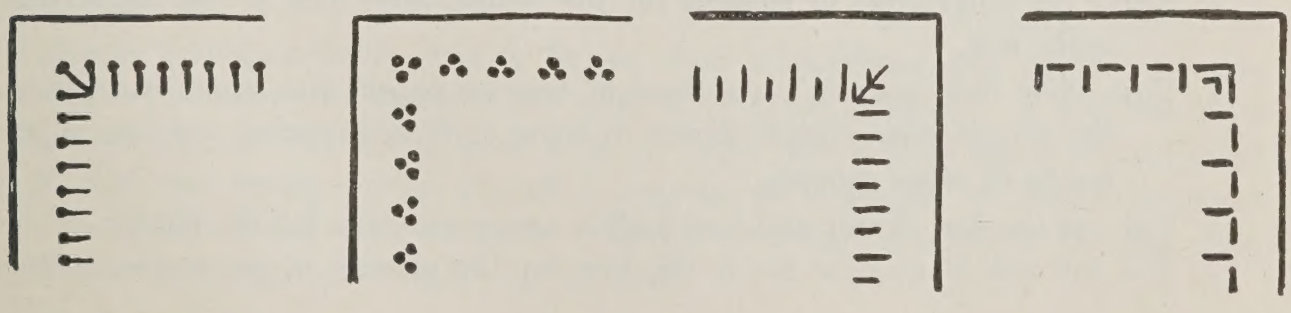
THE COLOURING OF DESIGNS

The detailed Course of Study suggests the use of one colour with gray, white, or black, in the designs made by Form II, Junior Grade classes. They may use one colour alone on the white or nearly white paper, or they may make certain parts of their designs gray or black, or may outline shapes with black. A pale, even gray tone may be put over the whole of that part of the paper which is to be occupied by the surface pattern or other design, and the units may be drawn in colour on this gray background; or an even tone of the colour may be used for the background, and the units finished in black on this colour.

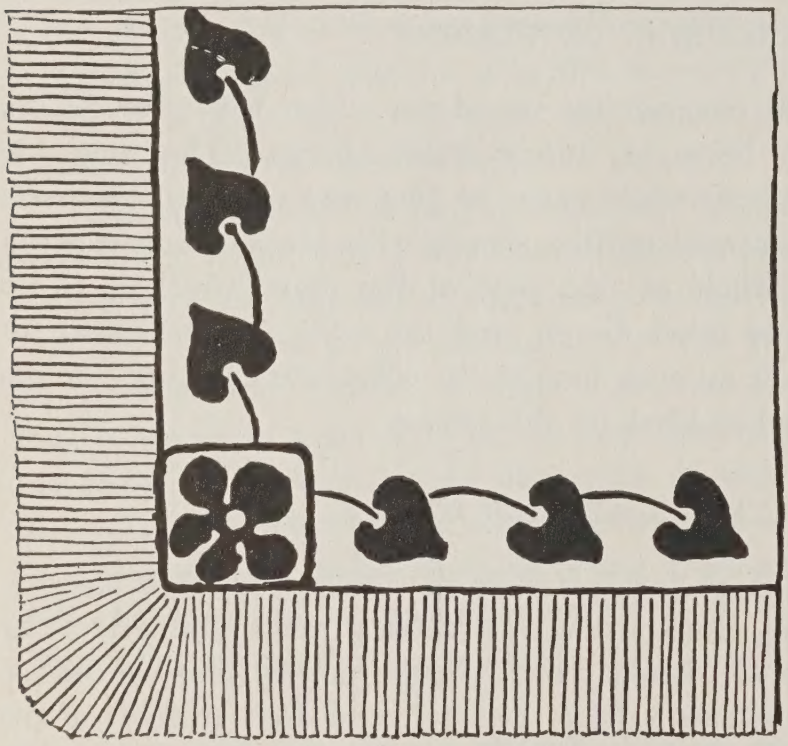
PROBLEMS IN APPLIED DESIGN

Some problems in applied design for this class have been suggested already. Together with these, the following illustrations, and those given with the text for Form I, Senior Grade, and Form II, Senior Grade, should make it possible for the teacher to plan a succession of problems to keep the interest of every member of the class sufficiently alive to ensure that painstaking effort without which good results in Design are impossible.

HANDKERCHIEF BORDERS



Dainty borders for handkerchiefs may be made with lines, dots, or a combination of both. The manner in which the corners may be turned is shown in the illustration. The drawing paper, foolscap, white tissue paper, or any other white or cream-coloured paper light in weight, may be used in making the handkerchiefs. The unruled side of a sheet of foolscap paper will allow for a handkerchief eight inches square. A plain margin should be left outside the border, to show the width of hem each pupil prefers.



CORNER OF SQUARE DOILY

Class results may be said to be ideal when the average is high and no two individuals have patterns precisely alike.

The making of a square doily or a cover for a doll's table will furnish a little more difficult problem of the same kind. The steps to be taken by the pupils in making a table cover similar to the one a quarter of which is shown in the illustration, follow:

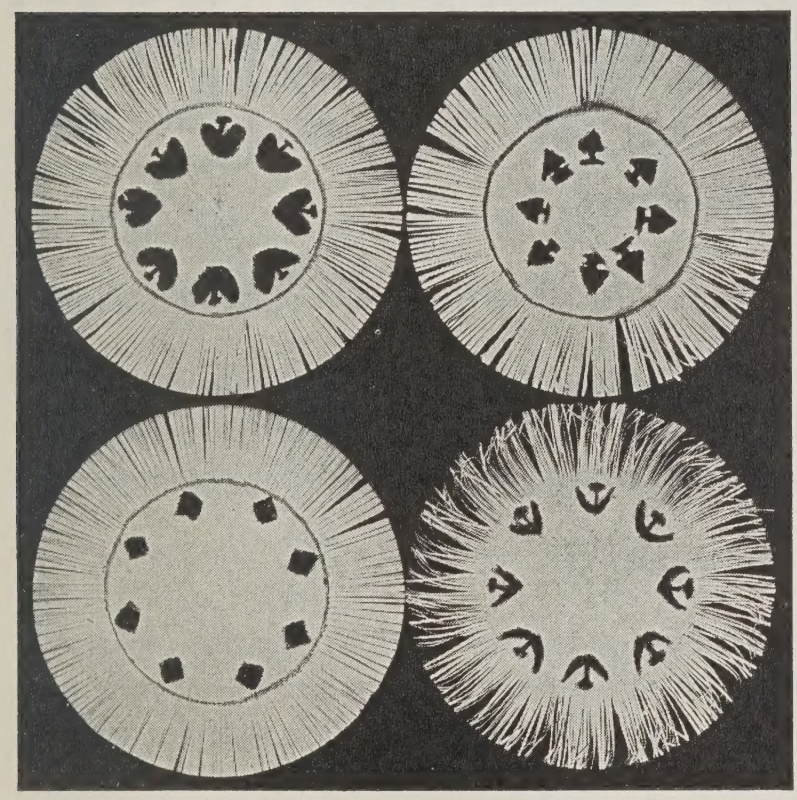
Plan for a six-, eight-, or ten-inch square of paper, according to the size of the paper from which the cover is to be cut.

1. Measure and cut the square of paper.
2. Mark off the inches along each side and rule very light lines, making a double row of inch squares all around the cover.
3. Leave the outer rows of squares for the fringe, and draw a line inside this outer row.
4. Rule some inch squares on a sheet of heavier paper, and practise drawing the top of some simple flower in some of these squares, and one of its leaves in other squares.
5. Cut out the best flower and best leaf to use as patterns for the border.
6. Use the row of squares inside the line for the placing of the border. Put

the flower in each corner and draw the leaves facing from the corners so that they will meet in the middle of each side.

7. Colour the leaves and flowers, keeping the tone light and delicate.
8. Determine whether a line or lines connecting the units in the border would improve it, and finish the border accordingly.
9. Round the outer corners of the paper with the scissors, and cut the fringe carefully. The teacher should illustrate on the black-board the method of cutting the corners.

CIRCULAR MATS OR DOILIES



PAPER DOILIES—BY FORM I PUPILS

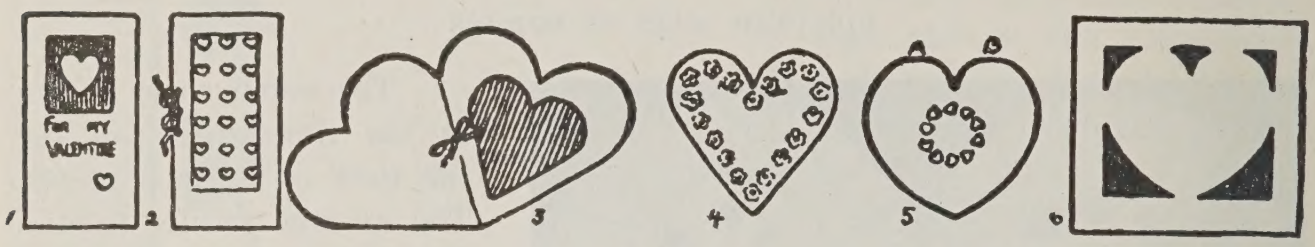
The round paper doilies in the illustration are the the work of Form I pupils. The average results from a Form II, Junior Grade class should be as good or better.

A small plate, saucer, and ink-bottle were used for tracing the three concentric circles, the outer one for the edge of the doily, the one inside it to which the fringe was cut, and the inner one from which the units in the border spring. A circle marker like the one described in the Form III, Junior Grade text, might be used by this class.

When each doily was cut out, it was folded carefully, first in halves, then in quarters, then again, to crease the eight equal divisions in which the units were to be repeated. A unit was then planned to spread toward the outer edge so as to look well in the space prepared for it, and was finally drawn in such a position as to appear to radiate or point from the centre of the circle outwards. Lastly, the fringe was cut to the line, with the scissors pointing to the centre of the circle.

VALENTINES

Suggestions for the making of six different valentines are shown in the illustration. They may be made any desired size. Figure 1 has a gilt heart raised by ladders made of strips of stiff paper folded in thirds with one end of each strip pasted to the under side of the heart and the other end attached to the card below, upon which a square of red paper has already been pasted. Below is lettered the inscription: "For My Valentine". Figure 2 is a booklet decorated with a



VALENTINES

surface pattern of tiny hearts. Figure 3 is a heart-shaped booklet opened with the back out so as to show the hinge. Figure 4 is the same shape closed, with a border of blue forget-me-nots for decoration. Figure 5 is a double heart, with the fold at the top making the hinges *A* and *B*. Figure 6 is cut from paper and is backed with pretty coloured tissue-paper which shows through the openings.

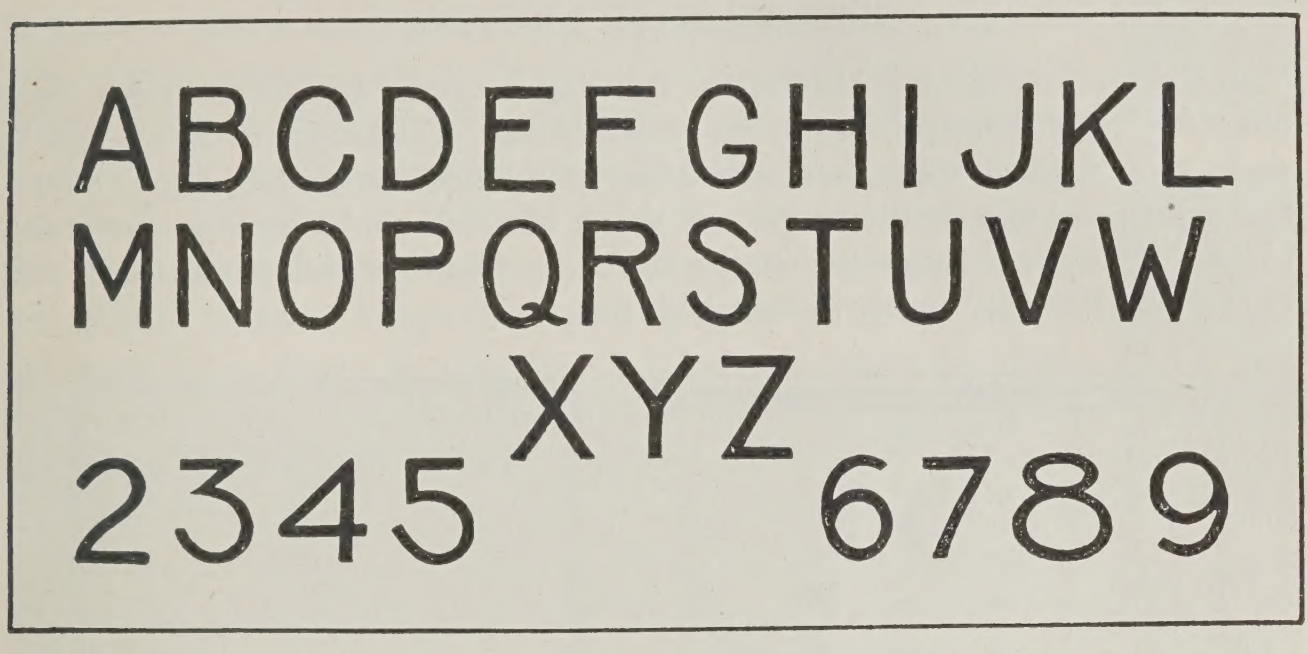
LETTERING

Before he reaches Form II, Junior Grade, the pupil has learned to try to make letters that are upright, of the same height, and arranged in an even line. He has also learned that the letters in words should be kept close together without touching, but that there should be a definite space between the words.

His greatest difficulty has been experienced probably in trying to keep the letters vertical. The only way to overcome this difficulty is to sit facing the desk squarely, with the lower edge of the paper on which the lettering is being done kept parallel with the lower edge of the desk.

The page of an ordinary exercise book or a half sheet of foolscap will be found useful for practice, as the space between the lines is an aid to the pupils in keeping the letters of the same height and in an even line. Larger letters may occupy two spaces. A space should be left between every two lines of lettering.

When a title is to be lettered, it may be done carefully between the lines on a piece of foolscap. The space occupied by the letters may then be cut out and placed immediately above the space where the lettering is to go on the cover. In this way the letters may be copied without difficulty in exactly the right place.

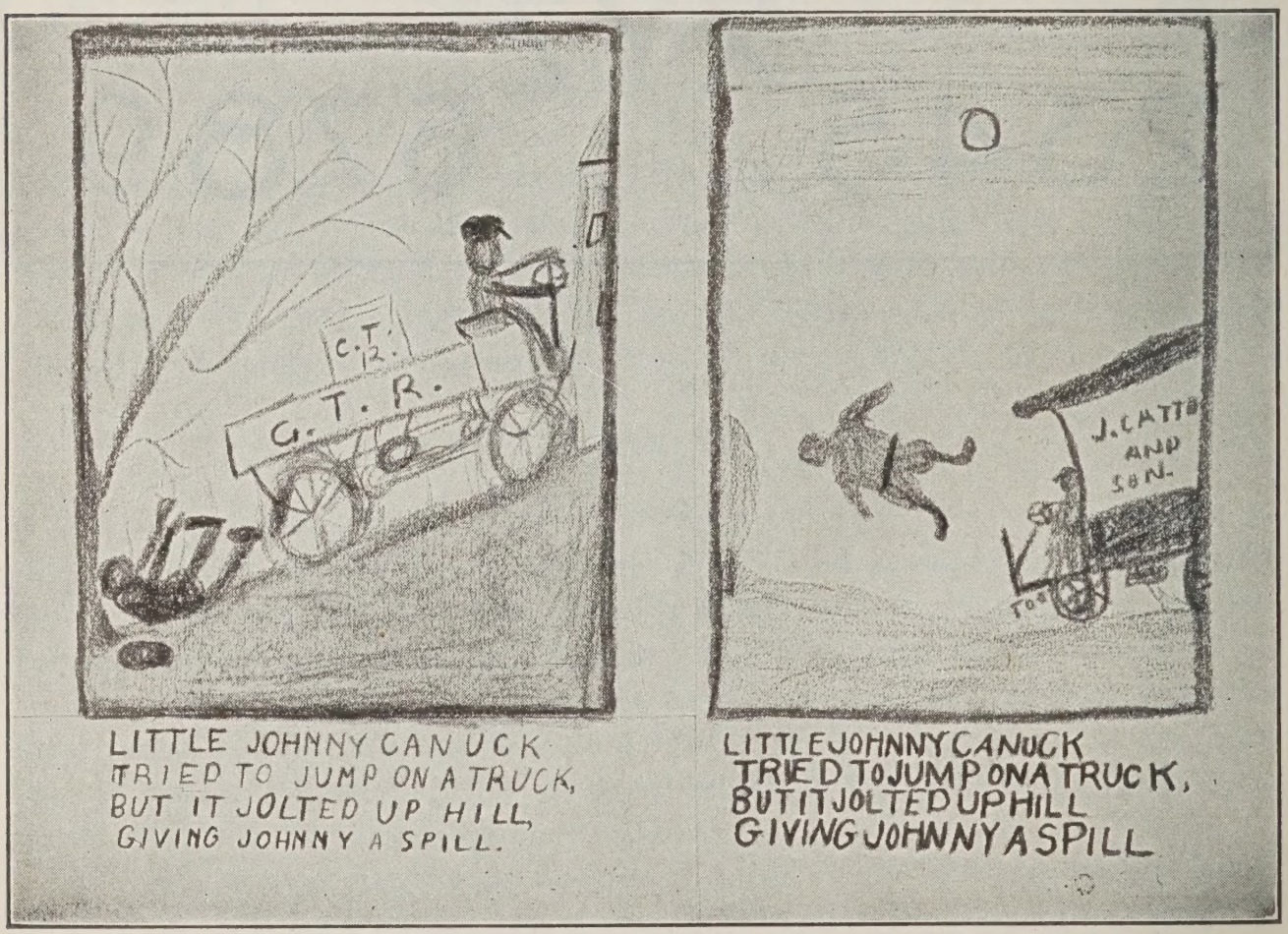


CHAPTER VIII

FORM II, SENIOR GRADE

ILLUSTRATIVE DRAWING

THE METHOD of teaching Illustrative Drawing in Form II, Senior Grade, need differ very little from that used in the Junior Grade. In addition to the use that is made of drawing in connection with other school subjects, games, sports, events, and experiences may be illustrated. A strong effort should be made in this Form to help the pupils to realize the relative size of the figures of children or people and of any trees that may appear in their pictures.



ILLUSTRATIVE DRAWING—BY FORM II PUPILS

Pure fun is dear to the hearts of Form II pupils, and humorous descriptions appeal strongly to them. Occasionally they may be allowed to make illustrations such as the drawings of "Little Johnny Canuck", which are the work of Form II pupils. They may be encouraged also to bring the teacher funny rhymes, from which he may choose suitable ones. Humorous happenings may also be described by some member of the class, after the teacher has approved of them. When a class is allowed to make these sketches, good drawing should be insisted on as far as is possible with so young pupils. The humour must depend upon the situation, not upon grotesquely exaggerated figures. Although it would be unwise to allow a class to indulge often in funny sketches, there are dull and heavy days when an amusing thought and the effort to express it in a picture will put everybody in good humour and make work lighter.

Where the story is about people, children, or animals, the figures expressing the action should be made first, after which the necessary surroundings may be added. The attention of the pupils should be called to some good pictures, in order that they may see the way in which the artists have placed their main figures to obtain a pleasing result, also to the size of these figures in proportion to the distant objects in the picture and to the size of the picture itself.

In the Ontario Second Reader are many selections which abound in word pictures suitable for illustration. Among these are *My Shadow, The Land of Story-books, Change About, Somebody's Mother, The Duel, A Wonderful Workman,* and *Jackanapes.*

Charcoal, crayons, or brush and ink may be used in the making of these pictures, which may be drawn in black and white or in one colour and black and white. The results are seldom good when the pupils are allowed to use many colours. Either orange, green, or red, however, used with black, makes a pleasing combination. Touches of crayon colour may be added to a charcoal drawing to increase its attractiveness.

"The old, old lady and the boy who was half - past three"—By Form II pupils

REPRESENTATION

DRAWING FROM FLOWERS

The difference between Form II, Junior Grade, and Form II, Senior Grade, in the teaching of drawing from flowers lies in the mediums used rather than in the method of presentation of the subject or the order to be followed in the lesson. When charcoal or crayons are used in the Senior Grade, the instructions already given in the Junior Grade may be followed. Mass drawing with a very soft pencil, sometimes called pencil painting, may be taken up in this Form and should be handled in a similar way to charcoal. It should be borne in mind that no outlines are used in any of this work.

The greater number of flowers or other specimens from nature drawn in Form II, Senior Grade, should be painted in ink or water-colours. Full directions for the use of these mediums is given in the lessons that follow.

DRILL IN MAKING BRUSH STROKES

The principal cause for failure in painting with ink is the difficulty experienced by the pupil in handling the new medium. His hand must be taught to guide and control the brush before he can expect to make creditable ink paintings. A drill in making brush lines will help him to get control of the medium. The brush should be brought to a good point and held in a vertical position by the pupil, while he draws strokes of light or heavy weight, as the teacher directs, from left to right or from top to bottom of the paper. In the second Exercise on handling water-colours in this Form will be found directions for making brush strokes that may be practised, using ink instead of water-colours.

GRASSES IN SILHOUETTE

MATERIALS

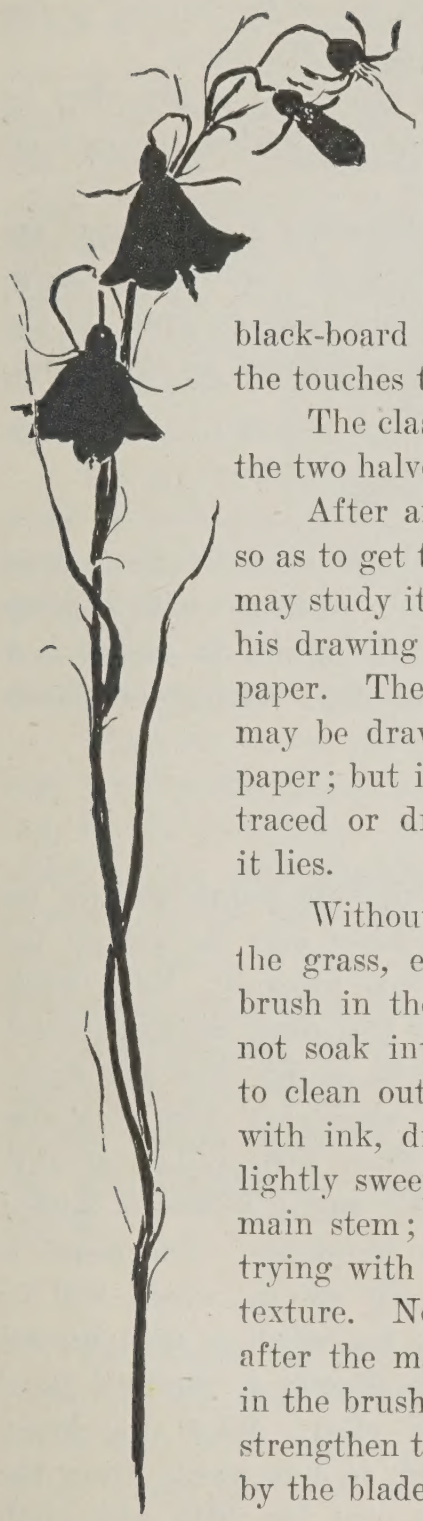
For the Teacher:

Specimens of grasses or sedges and a large brush for the demonstration to be made on the black-board, using water instead of ink.

For the Pupils:

Drawing paper 6″ by 9″, specimen of grass for each desk, held erect in a jar of sand or placed in position on a sheet of paper exactly like the one upon which it is to be drawn, brush and ink, water pan, and clean paint cloth.

METHOD



SILHOUETTE OF BLUEBELL

A lesson on grasses is given in Form I, page 50. The teacher may get some suggestions from it, or the lesson in Form II may be introduced by calling attention to the character of growth as shown in the specimens that have been provided. The differences in direction, shape, and texture of the parts should also be noted. The teacher should demonstrate on the black-board the proper stroke to be used for stem and blades and the touches that will best express the texture of the grass head.

The class may now fold the 6″ by 9″ sheet of paper and separate the two halves to produce two 3″ by 9″ pieces.

After arranging the specimen upon one of the sheets of paper so as to get the most interesting view of it, each member of the class may study it in this position, in order to estimate how large to make his drawing and in what position to place it on the other sheet of paper. The specimens may then be placed in the jars of sand or may be drawn just as they lie upon the paper; but in no case is a specimen to be traced or drawn on the sheet on which it lies.

Without making any pencil sketch of the grass, each pupil may first dip his brush in the water, so that the ink will not soak into the socket and be difficult to clean out; he may then fill the brush with ink, drain it to a good point, and lightly sweep in the direction line of the main stem; he may then paint the head, trying with light touches to represent its texture. Next, he should paint the blades after the manner he has already learned in the brush stroke lesson and, last of all, strengthen the stem where it is not hidden by the blades.

BOOKLET COVER

If for any reason it is desirable to have the silhouette in colour, a small quantity of wash of the desired colour may be prepared in one of the hollows in the lid of the paint-box and used instead of ink for the painting of the grass.

When a sequence of lessons in different grasses is given, the results may be bound into a small booklet, for which the accompanying illustration suggests an appropriate cover.

Other specimens from nature of which successful silhouettes may be made are budding and leafy twigs; flowers that are distinctive in shape, such as the snowdrop, tulip, and daffodil; stalks with seed packs; different kinds of fruit on the branch accompanied by some of their leaves; and such vegetables as the carrot, beet, or onion, with a few unwilted leaves still attached.

EXERCISES IN HANDLING COLOURS

There are different methods of handling water-colours so as to keep them bright and transparent, but all are alike in requiring colour to be got with as little mixing as possible. The following Exercises will help the pupils to realize how little mixing is necessary and will aid them in getting the crisp, transparent colouring that is so desirable in water-colour sketches.

FIRST EXERCISE

Each pupil examines his paint-box and makes sure that the paints and the lid of the paint-box are quite clean; he then brushes clean water over the yellow, the red, and the blue cakes, so that the whole top of each cake glistens. Next, while the surface of each cake is softening so that the colour will come off easily, each pupil places a sheet of drawing paper, the long way across, on his desk and draws six rectangles about one inch wide by two inches long, arranging them in a row about one quarter of an inch apart. The brush is filled with yellow of full strength but wet enough to flow easily from it, and this strong yellow is floated from the top down over the second, third, and fourth rectangles. The brush is now cleaned by pressing it against a clean piece of old cotton, which will be found preferable to blotting-paper for the pupils' use; the brush is then dipped into the water and pressed against the cloth, and this process is repeated until it is quite clean. By this method the water is kept clear. When the brush is quite clean, it is filled with strong blue, wet enough to flow easily from the brush, and this colour is floated from the top down over the fifth and sixth

rectangles. A slightly weaker blue is made by dipping the point of the full brush in the water and then twisting it in the lid of the paint-box, so that the water will run up into the brush and weaken the blue with which it is filled. This slightly paler blue is then floated on the fourth rectangle over the yellow. Both yellow and blue will immediately disappear, and a brilliant green will show in their place. The brush is once more cleaned and filled, this time with a strong, wet red, which is floated over the first rectangle. The same strong, wet red is floated lightly on the sixth rectangle over the blue, thus forming violet. The red is then weakened slightly with water and floated on the second rectangle over the yellow to form orange. In each case the first wash should be dry or nearly so, before the second wash is floated over it.

The paper should be kept slightly tilted so that the colour will tend to run down to the bottom of the rectangles. When the brush is pressed dry, the tip may be applied to the pool that forms at the bottom of the rectangle, to absorb the excess of moisture.

In the above Exercises, the colours blend on the paper; in the next Exercise, the blending is done in the brush.

When we try to match the colours in a flower, we find that the same petal may show yellow-orange and various tones of red-orange. This is frequently the case in the nasturtium. Petunias and phlox sometimes show red-violet and blue-violet in the same blossom, and a similar play of hues is to be seen in most flowers. In the same way we find that a blade of grass or the leaf of a plant may exhibit a range of hues running from yellow-green to blue-green. The following Exercise is designed to help the pupils to get this play of hues that we see in nature.

It is desirable, though not absolutely necessary, that each pupil be provided with petals of different flowers and with green leaves of different varieties, but the teacher should have a number of specimens of various hues that may be fastened up, in order that the pupils may analyse the colour and decide what the exact hue is.

SECOND EXERCISE

The paints are prepared as they were for the First Exercise. It is most important that they should be kept clean and should be well moistened with water before each lesson begins, in order that the brushes may be filled with colour easily. If the colour has to be worked off a hard cake, it becomes frothy and the brush is also injured.

BRUSH PRACTICE—FORM II, SENIOR

The paper is placed on each desk the long way across, the paint-box is placed at the back of the desk and to the right of the paper, the lid being opened toward the pupil. The water is placed either behind the box or to the right of it. The pupil, with both feet flat on the floor, sits at the left side of the desk, which he faces squarely.

For an orange petal, the brushes are dipped in the water and filled with yellow paint, then brushed across the red cake and twisted lightly in the lid to ensure the blending of the colours in the brush and also to bring it to a good point. The petal of the flower is then painted with one stroke, if possible.

The teacher should fasten a sheet of paper up at the front and show the class how to press the brush down so as to widen the stroke. If the petal the pupil has made is yellower than he intended it to be, he adds more red to the brush and twists it lightly in the same spot in the lid where the first brushful of colour was twisted, then makes a second petal; if it is redder than he intended, he adds more yellow. In this way, without washing his brush or working over any of the petals, he makes fresh strokes until he has made one of the colour he desires to match.

For practice in stem and blade strokes, the paper is turned over and placed the long way up and down. The cakes that have become soiled are cleaned off, and the brush is filled with yellow and blue, twisted to a good point, and held in a vertical position, while the fine line is swept in from the bottom of the paper upward with the point of the brush just touching the paper. If the colour is not strong enough, more of both yellow and blue are added; if it is too blue, more yellow is added, or more blue if it is too yellow; if it is too dark, more water is needed. The brush should be twisted lightly in the lid of the box before it is applied to the paper. When the brush is too wet, it may be allowed to touch the cloth, which will absorb the extra moisture. For grass blades, the stroke begins with the point just touching the paper and the brush is pressed down as it sweeps slowly upward, to be lifted again so that only the point touches as the sharp end of the blade is finished.

Daffodil, narcissus, and tulip leaves are excellent for brush practice of this kind. When more than one stroke is necessary, the brush is brought from the top down, lapping the edge of the first stroke while it is still wet.

When the Second Exercise is taken in the Spring, it may be followed by a lesson on painting the tulip or the daffodil. When it is taken in the Autumn, the salvia, sunflower, or common marigold may be painted in this manner. Small fruits, such as haws, rose hips, and barberries may be handled in a similar way.

In the following lesson, instead of mixing the colours in the brush, as would be done in painting from any flowers attempted in this Form, small pools of strong colour are prepared, so that a sufficient quantity may be floated rapidly over the comparatively large surface required for the representation of the leaf. It will be found necessary occasionally to take colour straight from the cakes, even though pools of colour have been prepared.

THE AUTUMN MAPLE LEAF IN WATER-COLOURS

Each pupil should be provided with a brilliant maple leaf and should have in readiness on his desk a three-colour paint-box, a No. 7 (or larger) paint brush, a piece of old, clean cotton, a water pan, and two sheets of drawing paper. One sheet of paper may be used for testing colours.

After the cakes have been well moistened so that they are softening and that colour may be easily obtained when it is needed, the maple leaf may be studied by the class in some manner similar to the following:

The teacher asks: "What have we for to-day's lesson? On what tree does it grow? What colour are maple leaves in Summer? Describe the shape". The last question being rather too difficult for the class to answer, the pupils are told to hold their hands up, turn the palm toward them with the fingers well spread out, and count how many tips there are. Their attention is then called to the fact that, like the hand, each leaf has five points. They note also that, although some leaves are broader and some have deeper notches than others, all have five large ribs which taper to the points from the place where the stem joins the leaf.

The teacher then continues: "Are the leaves green now?" Each pupil decides what colours can be seen in his leaf, and a few are allowed to describe theirs. They are now told to mix half a teaspoonful of strong yellow wash in one recess in the lid of the paint-box, a little bright red in another, and some green made from yellow and blue in a third. The teacher shows them, on a sheet of paper at the front, how they may paint the whole shape of the leaf with the yellow wash, and into this wet yellow mass blend the red and green tones that are seen in their leaves. When they have been counselled to study the leaf carefully and try to match the colours, placing each hue exactly where it comes, they begin by shaping out the leaf with the yellow wash and, when they have made this foundation shape correct, they proceed to match the colours, constantly comparing their painting with the real leaf as they work.

The colour of the ribs is matched next. The brush is brought to a good point, the central rib is swept in from the stem toward the tip, and the four side ribs are made in the same way. Care should be taken not to make the ribs too prominent and, if they are lighter in colour than the leaf, no attempt in Form II should be made to represent them. The line of the stem should be painted with one, long, steady stroke, thickening toward the end where it was attached to the twig.

When the work is finished, the really good examples may be put up for exhibition for a day or two. The paint-boxes may now be wiped out, the brushes washed and brought to a good point, and all materials put carefully away.

THE PUMPKIN IN WATER-COLOURS

MATERIALS

FOR THE TEACHER:

A fair-sized pumpkin of good colour, water-colours, large brush, drawing paper, and paint cloth.

FOR THE PUPILS:

Water-colours, water pan, No. 7 brush, drawing paper, clean cloth for draining out the brush and bringing it to a point.

METHOD

Discuss with the class the best position in which to place the pumpkin so that it will look well and be seen by all and, with the pupils' help, decide upon the colour to be used for it and also for its stem. Call their attention to its general shape, and lead them to notice the creases in it and that the one at the centre seems to be a straight line, while those on either side seem to curve more and more as they approach the sides, though all begin together at the top and end together at the bottom.

The attention of the pupils having thus been directed to the general characteristics of the model, they may prepare to paint it.

The large wash for the orange colour of the pumpkin is made by blending red with yellow until the colour of the pumpkin is matched. At least half a teaspoonful of this wash will be required to cover the whole shape with the exception of the stem, which will be painted afterwards. A little of the first wash is taken in another hollow of the paint-box, and from it the stronger, darker colour for the creases is made by adding a little more of red and a touch of blue.

After the teacher has made a rapid demonstration of the method of beginning, the pupils may paint the pumpkin about four inches wide, by putting a brushful of the orange wash in the middle of the paper and pushing it out, making it larger and larger with plenty of wash, until the painted pumpkin is as near the shape of the model as each pupil can make it.

The class should be cautioned to work quickly, keeping the whole shape wet, and not forgetting to make the small curves that show in the outline at top and bottom between the hollows.

While this general wash is quite wet, the pupils should fill their brushes with the stronger, darker colour which they have already prepared and paint the middle crease, or hollow, making it with one long stroke of the brush, treating the side ones in a similar way with colour just wet enough to show the hollows without spreading. If the wash is applied quickly and the creases are put in before any of the shape is dry, a softly-blended surface will result. If the high light, a pale spot on the shiny surface of the model, is very noticeable, it can be shown by wiping out some of the damp wash with a squeezed-out brush.

While this orange wash is drying, the colour for the stem may be made. It is dark green, almost brown-green. Yellow and blue without much water will give the green, if a touch of red be added. The class may now paint the stem, bearing in mind that it is short and thick, and widens and is full of creases where it joins the pumpkin.

The finished water-colour sketch may be cut to shape for the cover of a Thanksgiving card.

Other fruits and vegetables that may be handled in a similar manner to the pumpkin are different kinds of squash, the egg-plant, onion, carrot, beet, and tomato. See illustration opposite page 134.

The attention of a Form II class should not be called to the cast shadow.

TREES

The Form II, Senior Grade teacher is advised to read the lessons on the drawing of trees in the preceding Forms, as the chief difference in the work done in this Grade lies in the use of ink or water-colours instead of charcoal or crayon.

In the ink painting of a tree, an attempt to get the different textures of the trunk and foliage should be made. The several illustrations of trees in the Manual will help the teacher to see how this is done, and he may show the class,

COVERS FOR BOOKLETS OF TREES

using a large brush and water on the black-board for the purpose. A short, irregular, up-and-down stroke is generally used for the trunk, and the strokes should lap sufficiently to give to it an appearance of solidity. The same sort of handling is given any bare limbs. The stroke should follow the direction the limb takes. To represent the foliage, the brush should be kept very full of ink and held so that it leaves an irregular three-cornered blot on the paper. The ink-filled brush is zigzagged upon the paper without being lifted wholly from it, until a mass of three-cornered touches that overlap each other thickly along the irregular centre of the bough and show leaf-like, indented edges, has been shaped out, and a bough in full foliage has been fairly represented. Other similar masses are added, until the shape of the whole tree top is portrayed. Practice will give the sort of stroke or touch that is required to express different kinds of foliage. Usually touches that most nearly represent the leaf shapes will, when massed together, best express the texture of the foliage.

The two extremes of a solid mass of black and a collection of disconnected spots are to be avoided.

WINTER APPEARANCE OF TREES

Before the Winter appearance of trees that lose their leaves in the Autumn can be expressed with brush and ink, the characteristic branching as well as the proportions and general shape of the whole must be faithfully studied.

It will be seen that, even in those trees where the branches are almost level, each branch joins the main branch or the trunk in such a way that it could not be broken off at the joining, while the sap is in it, without tearing down for some distance. Each branch or twig has the appearance of continuing, through the larger branches from which it springs, all the way down to the root. This appearance can be given by beginning the line for each branch in the branch from which it springs, some distance below the point from which it is to be drawn

and turning it out at the right angle when that point is reached. Great care must be taken to show the diminishing size of each branch as the smaller ones grow out of it. Considerable brush practice is necessary before the fine twigs can be indicated, and too much should not be expected from a Form II class.

The tree should be studied at a sufficient distance to prevent the seeing of details, such as terminal buds, which the pupils are likely to make too important.

LANDSCAPES

In the preceding Forms the pupils have been led to study the appearance of the sky, earth, and distant trees and to try to represent these in their landscapes. No definite effort has been made to have them place trees in the foreground, although a Form I, Senior Grade class has done so under the training of a special teacher in the landscape illustrations shown. With average pupils it will be found soon enough to undertake it with a Form II, Senior Grade class. Before attempting to paint a landscape showing trees in the foreground, the class should be urged to notice how much of a tree that is not far away shows against the sky and also what difference there is in the appearance of a tree which is quite close and of one of similar size a little farther away.

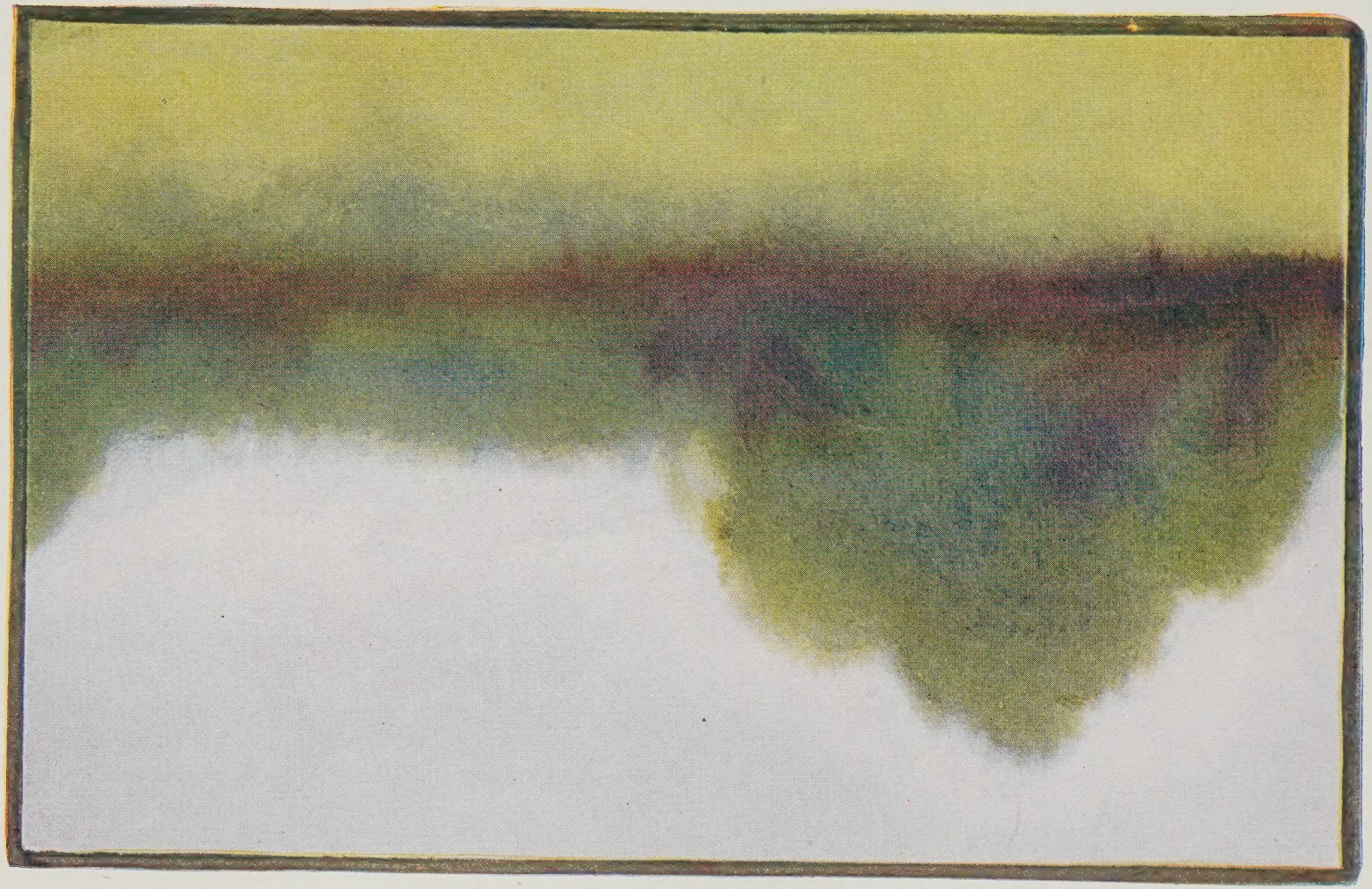
LANDSCAPE IN INK

The white paper may represent the sky. For the foreground, a tone may be prepared in one of the hollows in the lid of the paint-box by adding a drop or two of ink to a very small pool of water. Twice as much ink may be added to this pool for the distant trees, while near-by trees may be painted with the undiluted ink. Black water-colour may be used in the same way instead of ink.

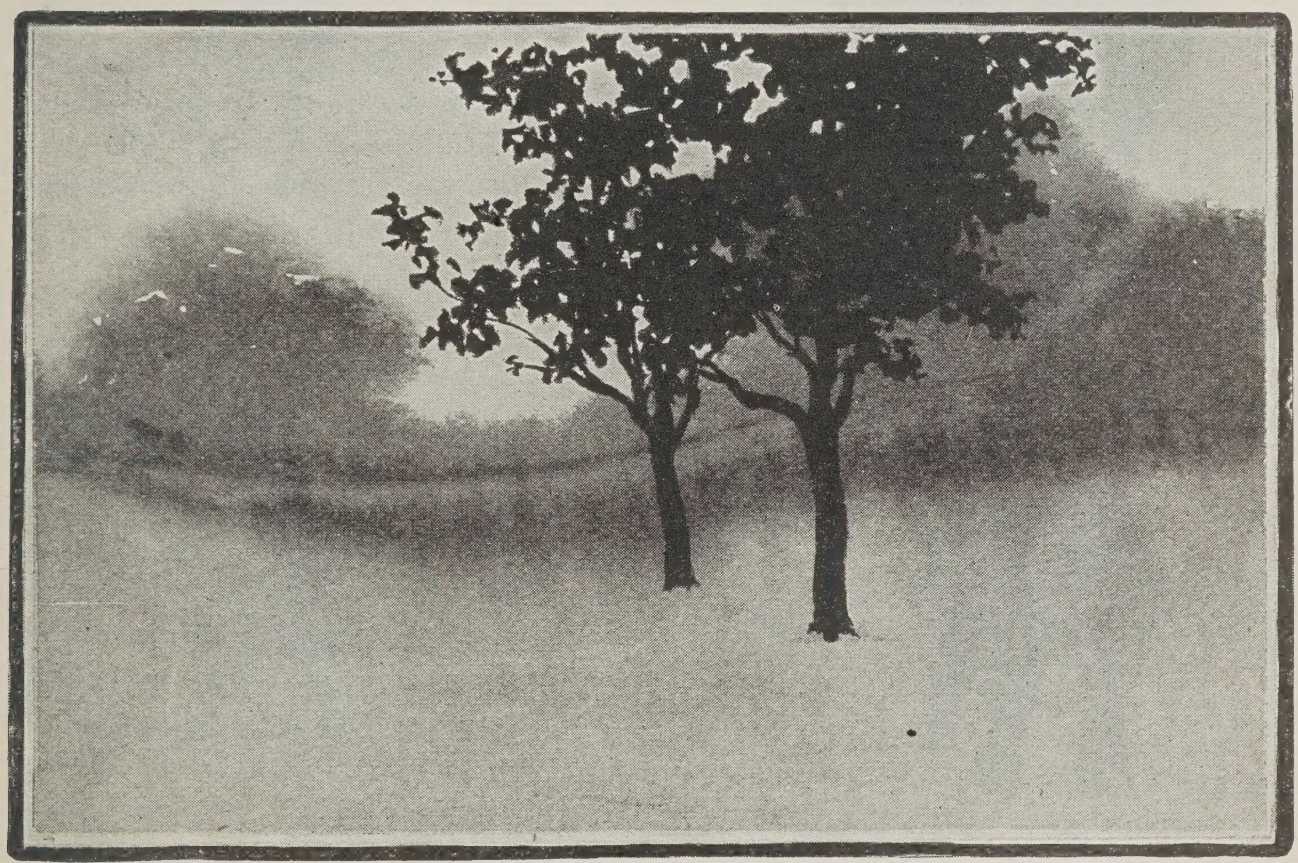
For a Winter scene, the sky space may be covered with the lighter tone and the white paper may be left for the snow-covered earth.

The following steps may be taken by each pupil in painting an ink landscape:

1. The preparation of pools of gray wash
2. The drawing of a rectangle with pencil for the landscape, leaving good margins
3. The drawing of a brush-and-ink line across the rectangle, so as to divide it into two unequal spaces for sky and earth



4. The brushing of a wash of water over the whole rectangle
5. When the paper has ceased to glisten, the laying of the lighter gray tone from the brush line already placed to the lower margin of the rectangle (Instructions for the laying of a wash are given on page 135.)
6. The shaping out of the uneven mass of the distant woods from the brush line up against the sky, while it is yet damp



LANDSCAPE IN INK

7. When the landscape is almost dry, the painting of the trees in the foreground, with the undiluted ink
8. The drawing of a firm but narrow brush-and-ink line over the inclosing pencil lines.

Some classes have greater success when the fifth and sixth steps are interchanged.

If two small landscapes are kept going at the same time, the class can work from one to the other, without having to wait for a tone to become set before the next step in order can be taken.

DRAWING FROM ANIMALS

DRAWING FROM ANIMALS

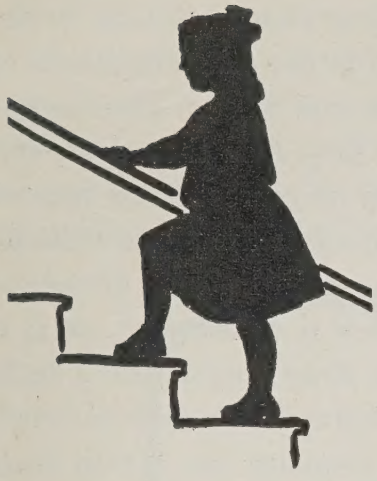
Suggestions concerning the drawing of animals have been given in the previous Forms. The aim in view in each case is to make the pupils' mental concepts clearer. If it is not convenient to have an animal brought to school for study, the class may have their attention directed to it by pertinent questions from the teacher. After a few days have been allowed for its study out of school, a story for illustration may be told, that will require the drawing of it. The class may then be allowed to criticise the drawings, in the light of the observations made previously.

DRAWING FROM THE FIGURE

Some hints regarding drawing from the figure have been given already under "Illustrative Drawing" in Form I, Senior Grade, and Form II, Junior Grade. More thought should be given to the subject in Form II, Senior Grade. Action is the thing of first importance in this Form, and the pupils may be posed to represent such actions as sliding, walking, leaning, pushing, pulling, climbing, etc. The first drawings should be in charcoal mass, and more emphasis should be placed upon getting the action of the figure than the proportions. Proportions are important and must be considered here, but the time to emphasize them is later.

INK PAINTINGS, OR SILHOUETTES, OF CHILDREN

Poses taken from sports or games in which boys and girls are interested are excellent subjects for painting in silhouette and may be painted in a simple way with ink or black water-colour.



Silhouettes of children—(*a*) climbing stairs, (*b*) sliding, (*c*) skipping

PREPARATION

Before the day for the lesson the teacher should ask the pupils to watch very carefully the particular game from which he intends to select a pose. Some special position should be chosen for observation in the lesson, such as a boy with a hockey stick about to lift the puck.

MATERIALS

FOR THE TEACHER:

A hockey stick brought by one of the boys, and a large brush to be used with water for black-board demonstration.

FOR THE PUPILS:

Drawing paper, brush, ink or black water-colour, paint cloth, and water.

METHOD

Before posing the model, the teacher should rapidly paint with water on the black-board some pose quite different from the one chosen for the lesson. He does this in order that he may show the class how to handle the materials. He should then ask one of the boys to put on his cap and mittens and come to the front of the room to take the attitude chosen for the pose. In order that all may get a good view of the model, he should be placed on a high platform or a table, preferably close to a well-lighted corner at the front of the room. It may be necessary to pose two boys, one toward each side at the front. The teacher should see that each pupil has an uninterrupted and interesting view.

As the boy keeps the position, the attention of the class is called to the main direction lines of the figure, the angle at which the body is bent, the posi-

tion of the feet in relation to the head and of the head in relation to the shoulders, and to any other points that will help the pupils to get a clear mental picture of the boy's posture. The model may now rest for a moment, while the other members of the class close their eyes to see if they can imagine him as he was posed. The teacher may aid them in this by properly directed questions. Then they open their eyes, and the boy takes the position again, that they may strengthen or correct their mental pictures. He now takes his seat, and each pupil decides what space the picture should occupy on his paper and, with a brushful of ink, draws the main lines of direction, the action lines of the figure. The line to represent the back is drawn first, as it is the longest line. The action lines of arms and legs may be drawn next, and a light line for the direction of the hockey stick. After again closing their eyes to recall the appearance of the model, the pupils reopen them to compare the action lines they have drawn with their mental pictures of the boy's attitude, and correct them if possible. They then shape out the head and shoulders and the remainder of the figure upon these lines.

As the class works, the teacher should pass round noting mistakes that are being made and, when he finds a fault that is general in the drawings, all should be told to stop work and close their eyes while he calls their attention to the point in question. Each should then examine his drawing at arm's length, and those who have made the mistake under consideration should stand, in order that the teacher may see that each realizes his mistake.

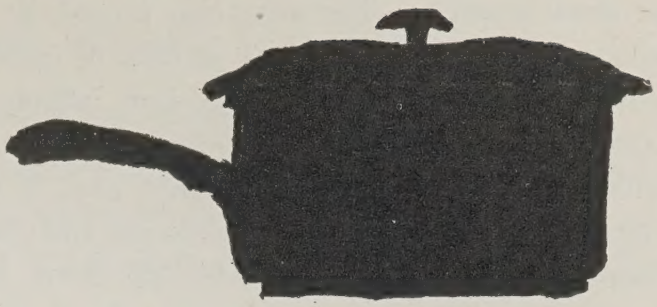
After sufficient time (probably five minutes) has been given the class, the model is posed again for a moment, while the pupils hold their drawings at arm's length in front of them to compare them with the model. The teacher stands at the back where he can see the drawings and the model. Aided by questions from him, the pupils note their mistakes and, if time permits after the boy has resumed his seat, another silhouette is made on the other side of the paper, in which each boy tries to improve on his first drawing.

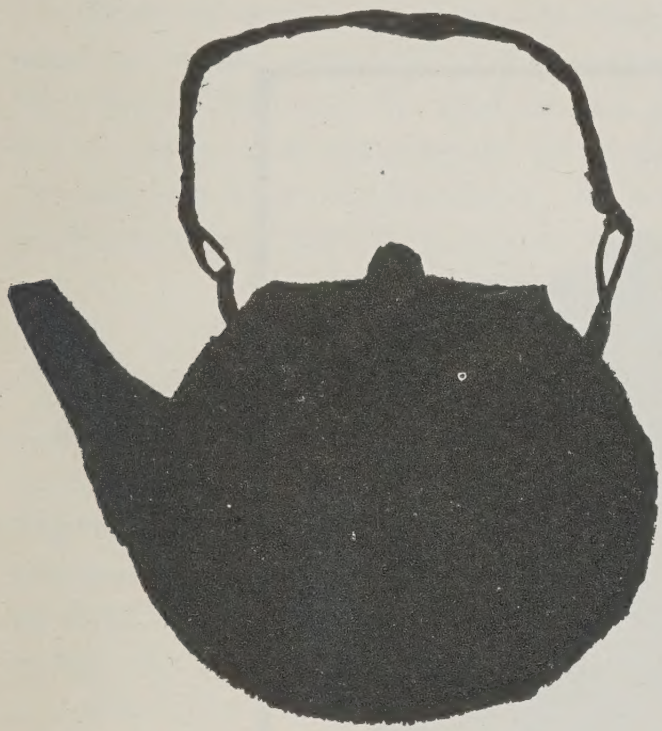
The boy or boys who posed for the class make silhouettes from memory from the attitude as they have seen it in the game. Where marks are given, an allowance should be made them for the disadvantage of not having studied from the model in class.

OBJECT DRAWING

The instructions that have already been given in the Form II, Junior Grade text, with regard to object drawing, apply equally to Form II, Senior Grade.

Exercise should be given this class both in drawing from memory and from the model, although increasing emphasis is placed upon the latter from Form II, Junior Grade, upward. Charcoal, ink, and pencil mass are the most satisfactory mediums to use for the purpose.



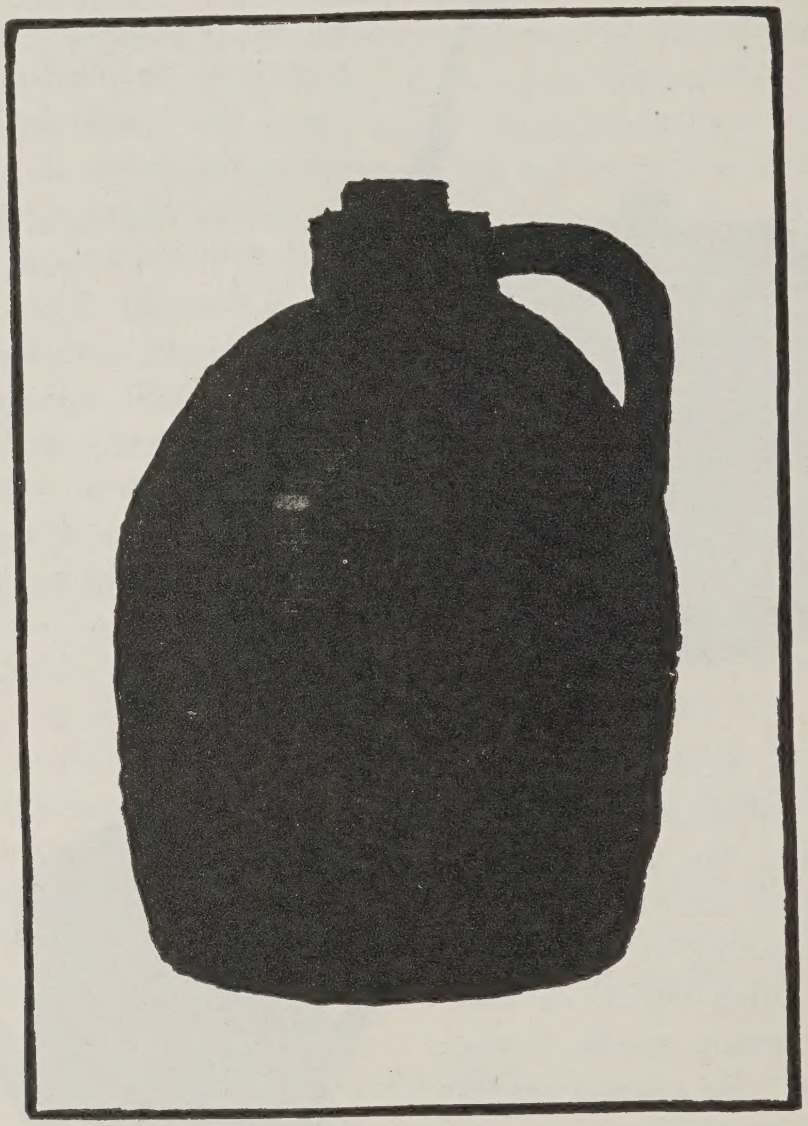


When such objects as jars, jugs, kettles, or saucepans are to be drawn, books may be piled one upon another upon the boards which are placed across the aisles, to bring the top of the object placed upon the pile on a level with the eyes of the pupils who are to draw it. They will not be able to see into it in that position, and its top edge will appear straight, not curved, to them. When objects have been arranged in this way for the whole class, the lesson may proceed after the manner suggested in Form II, Junior Grade.

If a Form II, Senior Grade class has developed a sufficiently keen sense of form to bring the average mass drawings in ink of the class up to a high standard, blocking in with pencil may be taught, using objects of very simple form, as cream crocks, bowls, mustard jars, etc. No attempt should be made to take pencil measurements

OBJECTS IN INK MASS—BY FORM II PUPILS

or show accents. The attention should be confined to getting the proportions and shape correct. The pencil should be held lightly under the hand far from the point, to ensure a light gray line, which may be strengthened gradually as the correct shape is found. No erasing should be permitted. Further instructions are given in Form III, Junior Grade, and, if the Form II teacher has any doubt concerning the ability of his class to see and express form in mass, it would be better to leave all drawing in outline for the Form III, Junior Grade, and higher classes.



OBJECT IN INK MASS—BY FORM I PUPIL

PICTURE STUDY

THE SISTINE MADONNA—RAPHAEL

This picture must be treated in a manner quite different from that used with the *Woman Churning.* The latter dealt with a phase of life which the pupils can easily understand. Childish conjecture would mar the beautiful lessons in *The Sistine Madonna.*

Form II pupils are at an age when, still dependent on their mothers, they begin to realize something of the meaning of mother love, and for this reason *The Sistine Madonna,* the most famous of all Raphael's Madonnas and considered one of the greatest paintings in the world, is a most desirable picture to hang on the wall of a Form II class-room. We will suppose that a picture large enough to be seen from any part of the school-room is in front of the class.

THE ARTIST

As in the picture lessons outlined for Form I, Senior Grade, and Form II, Junior Grade, a little talk about the artist and some idea of his personal appearance will give to the pupils an added interest in the picture that they are studying. Raphael's portrait, painted by himself, shows a beautiful youth with clear, frank eyes and a singularly sweet expression. His surname was Sanzio. He was born on Good Friday, in the year 1483, and died exactly thirty-seven years later, strange to say, also on Good Friday.

His father was an artist and, no doubt, when Raphael was a little boy, he played with brushes and pencils instead of toys; and it is thought that his father gave him his first lessons in drawing. He was left an orphan when he was still a child and, at the age of twelve, he went to the studio of an artist in Perugia called Perugino. There he worked and studied for eight years, winning the affection and admiration of his teacher, whose style of painting he imitated so closely that their pictures could not always be told apart. Just before leaving he painted a celebrated picture which represents the marriage of the Virgin Mary.

As Perugino and his pupils worked together they must have spoken often of the wonderful art treasures of the city of Florence, among them the dome of the cathedral, the bronze gates made by Ghiberti, and Giotto's beautiful tower. Four great artists were at work there at that time, and young Raphael must have longed to go there to work and learn. He returned to Urbino for a while, but there was

little there to inspire him. He may have had a feeling, too, that in Perugino's style of painting he could not fully express the beautiful thoughts that thronged his mind. He soon went to Florence, and under the influences there his manner of painting at once began to change, his work growing stronger. He painted now with richer colours and his figures became more natural.

During Raphael's short life, which was a very happy one, he painted nearly three hundred pictures and made over five hundred drawings and studies. He was admired and beloved by all, not only for his great gifts, but because of his kindly disposition.

THE PICTURE

The picture we are to study was painted not long before the artist's death. It is called *The Sistine Madonna* because it was painted for the monks of St. Sixtus at Piacenza, a little company of pious men bound by vows to a life of unselfish labour and religious devotion, who took Sixtus for their patron saint. According to tradition St. Sixtus was a bishop of the church at Rome in the third century, who suffered death at the Emperor's command rather than be disloyal to his faith. The monks at Piacenza named their monastery after him, believing that up in Paradise he would have a fatherly interest in them and would pray that they might be kept faithful.

Raphael painted this picture for these monks to be used by them as a procession standard, but they placed it above the altar in the chapel of their monastery.

More than two hundred years later it was sold to the ruler of Saxony for nearly thirty thousand dollars. Later it was seized by Napoleon and carried to Paris, but was afterwards returned and is now in the Dresden Gallery.

The picture is intended as a vision of Divine love. The heavy curtains looped at either side give the impression that they have been drawn aside for a moment that the world may see the marvellous vision. The lovely Mother with the Divine Child in her arms moves gently forward on the clouds. A faint breeze blows back the drapery that, passing around her head, helps to draw the baby close to her breast.

The picture seems to suggest that mother love is the love most like God's love and that, as her strong arms support and uphold the Babe, so are the "everlasting arms" of God beneath and around His children.

At the left side of the picture is St. Sixtus, an old man with a beautiful face. He is robed in gorgeous vestments, but his attitude and expression indicate self-

forgetfulness and humility. He seems to be pointing to his people beneath and asking a blessing on them. On the parapet below him rests the tiara, the symbol of his papal rank. Raphael must have felt that it would spoil the picture if he placed this heavy crown upon the head of the old saint; possibly he meant also to express that earthly rank and magnificence sink beneath the one great fact of the eternal love of the Father as exhibited in the sending of His only Son to be a little human child, to grow up among men, to show them how to live, and to end His human life by the cruel death on the cross for the salvation of mankind.

On the Virgin's right kneels St. Barbara, a fair young girl. Her clothing is simpler than the rich draperies of St. Sixtus and more in keeping with her girlish form. Behind her we can see a glimpse of the lonely castle in which tradition tells us she was imprisoned by her father that she might be kept from all knowledge of Christianity. In spite of this precaution, it is said that she heard of the new faith, became a Christian and, rather than deny her faith, allowed her angry father to put her to death. She looks down in reverent love as though she would ask us to join her in thanking God for His great gift.

Behind the mother and child is a bright background of countless angels, and on the parapet below two lovely little cherubs lean, gazing upward with adoring eyes.

Besides having explained to them as much as they can understand of the meaning of the picture, the pupils should have their attention called to the beautiful balance that Raphael has maintained in it while still keeping the two sides quite unlike. Cover any of the figures and the picture at once looks less perfect. He has expressed his thought in so beautiful a way that no part could be changed without rendering the whole less satisfying.

The picture hangs now in a room by itself in the Dresden Gallery, and people from all over the world go to see it. Heavy curtains shut it off from the main gallery, and guards stand always at the two doors. Those who enter to look at it feel compelled to speak only in whispers. Its great beauty; the position in which the artist has placed the main figures, so that we seem to be looking up at them; the calm blessing in the Mother's eyes, which seem to pierce beyond us to all that is hidden in the future; and the solemn meaning in the eyes of the Divine Child fill us with awe and reverence. We feel that only one Mother, and that the Virgin Mary, and only one Child, and that the Christ, could have been portrayed thus.

CHAPTER IX

COLOUR

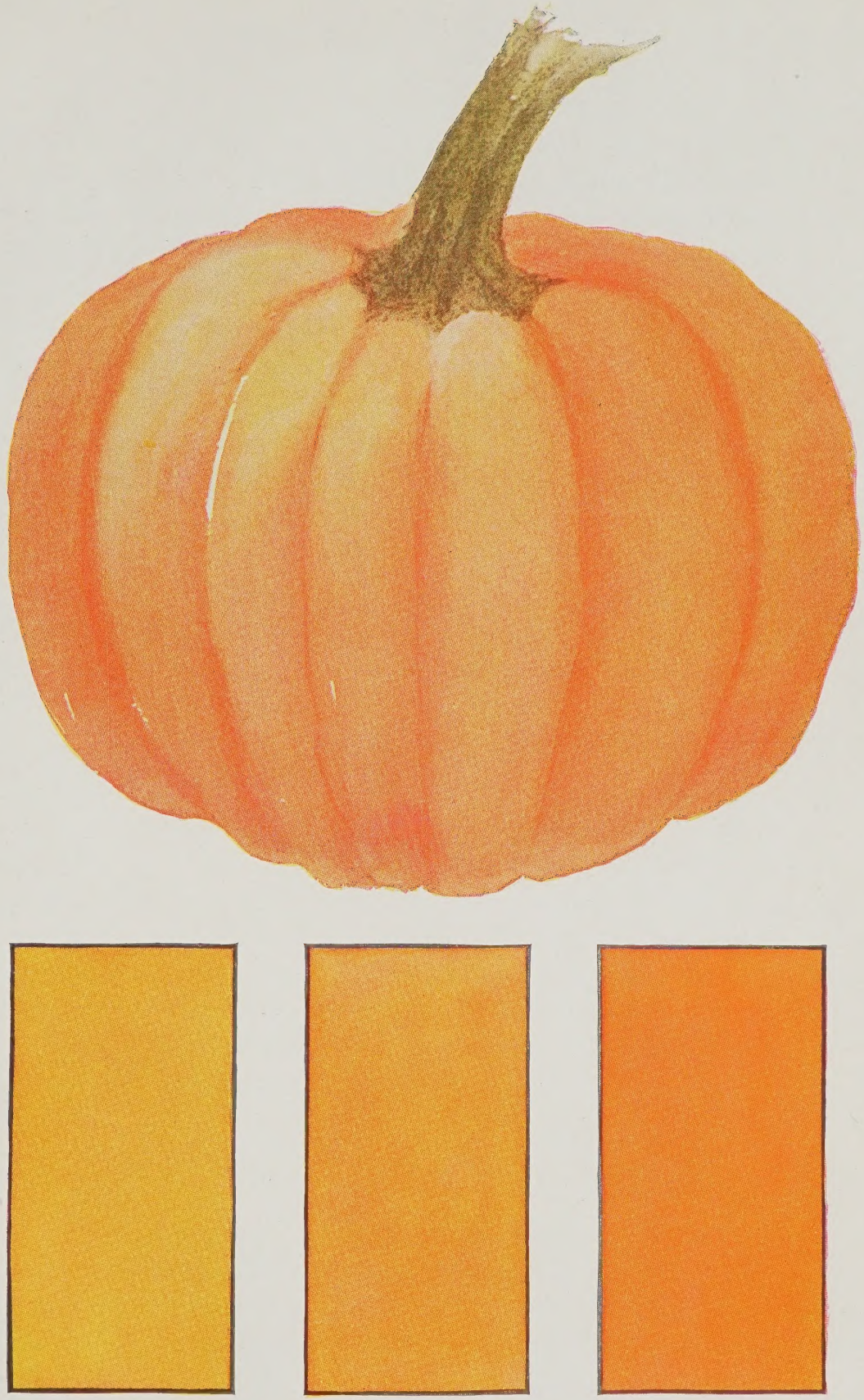
PRIMARY AND SECONDARY COLOURS

THE CLASS has learned through the Exercises in handling water-colours given in connection with Representation on page 116 that no one of the three colours, red, yellow, and blue, can come in contact with either of the others while moist without forming another colour. For the sake of convenience and because the three colours, red, yellow, and blue, cannot be formed by any combination of colours in paints, chalks, or crayons, these may be called *primary colours*; and the three colours which result from the blending of these primaries in pairs may be called *secondary colours.* The three secondary colours are orange, green, and violet.

HUES OF COLOUR

In making a secondary colour, too much or too little of one of the primaries that go to make it may be taken. The colour formed in that case has a leaning to one or the other of the primaries, and an intermediate hue is formed, as a yellow hue of green or a blue hue of green, called respectively yellow-green and blue-green. These hues are often found in specimens from nature, and the class should know how to make them when they are required. The order to be followed in a lesson on the making of the hues of orange is given below:

1. The placing on each desk of paper and water
2. The placing of the paint-box and the moistening of the cakes
3. The drawing in pencil outline of three rectangles, each about one inch by two inches
4. The putting sufficient water in one of the depressions of the lid to make just enough wash to cover the three panels
5. The working of the brush back and forth from this pool to the yellow cake, till a strong yellow wash is made
6. The addition, by the same method, of sufficient red to the yellow pool to make it a strong orange in colour. An extra sheet of paper should be kept for testing the colour.



7. The painting of the middle panel with this orange wash. (The paper should be held at the top corner with the left hand and slightly tilted so that the wash will tend to run down. The brush should be filled with the orange wash, and the colour applied across the top of the rectangle and dragged lightly down till the bottom is reached.)
8. The transferring of half of the orange wash that is left to another depression in the lid of the box, where sufficient yellow is added to it to produce a yellow-orange, which is then applied to the rectangle to the left of the one covered with orange
9. The adding of sufficient red to the first orange pool to form red-orange, which is applied to the third rectangle.

The middle panel is now orange, to the left of it is yellow-orange, and to the right, red-orange.

It must be remembered that there are a great many gradations of hue between yellow and orange and orange and red; and it is sufficient to expect the pupils in a Form II class to make a hue that is noticeably yellower and one that is noticeably redder than orange.

Green with yellow-green and blue-green, and violet with red-violet and blue-violet, should be made in a similar way.

THE FLAT WASH

It is a comparatively easy matter to cover small surfaces, such as those used in the last lesson, with an even wash of colour; but occasion frequently calls for the covering of large surfaces. Especially is this the case in Design, where large backgrounds have to be coloured in the making of surface patterns. It is therefore necessary to have some previous practice in the laying of flat washes, in order to avoid spoiling work that has taken some time to prepare.

THE APPLYING OF A FLAT WASH

Order to be followed:

1. Distribution or arrangement of materials required
2. The moistening of the paints that are to be used
3. The drawing of a rectangle in pencil outline on the 6″ by 9″ paper, so as to have its longer dimension vertical and allow a margin of one inch at the top and sides of the paper and two inches at the bottom

4. The preparation of a sufficient quantity of wash of the colour required in one of the depressions in the lid of the box, after the method described in the last lesson. (A teaspoonful of water should make plenty of wash to cover the rectangle prepared. In order to prevent waste the class should learn to estimate what quantity will be required for a given surface. It is better however to make too much than too little.)
5. The applying of the wash.

Each pupil should work with a full brush, carrying the wash from left to right across the top of the rectangle. The left hand should hold the paper so tilted all the time that the colour will have a tendency to run down. If the brush is kept full of the wash, a pool will form at the bottom of the brush stroke as it is carried across the space. Each fresh stroke should be painted into this pool, thus moving it along until the bottom of the rectangle is reached, when the brush should be pressed against the cloth, that it may be dried and its point applied to the pool of colour at the bottom of the rectangle, to absorb it. Great care should be taken to keep the paper tilted until this excess of wash has been removed, lest it may run back and form an ugly line.

The sides of the panel should be kept straight as the wash is brought down. Any working over the wash is almost certain to spoil it, but one wash may be floated over another if the first has been allowed to dry.

If for any reason it is necessary to cover a whole sheet of paper with a wash of colour, the paper should first be fastened at the four corners to a board, with ordinary sharp pins, and allowed to remain in that position until dry, otherwise it will curl up and in all probability be blemished.

THE DROPPED AND FLOATED WASH

Another name by which this wash is sometimes known, the *blotted wash,* is rather perplexing. The name given it here and in the Course of Study suggests how it is made. The rectangle or other shape to be covered is first brushed all over lightly with clear water, and on this moist surface the colours are dropped clear and bright, straight from the cakes, and the paper is tilted in any desired direction to allow the colours to meet so that no part of the rectangle is without colour.

The brush should be filled with one colour first, as yellow, and irregular spots of this should be dropped here and there over the surface of the rectangle, after

which the brush should be cleaned rapidly and filled with strong, bright red or blue, which in turn is dropped into clear spaces here and there over the rectangle in the same manner as the yellow. The colours are then allowed to blend in the manner explained above. If necessary, a damp brush may be used to drag the colours to the edge of the rectangle.

If the wash has been successfully applied, besides the three colours, yellow, red, and blue, which were dropped into it, orange, green, and violet, with the intermediate hues may be found, and possibly tones also of gray and brown.

The class should be led to discover what combinations have made the different colours that may now be found. It will be seen that where blue, red, and yellow have run together in a very wet condition, gray has resulted, and where strong blue has come in contact with strong orange, brown has been made.

If time can be spared for the purpose, the dropped and floated wash may be taught in a sequence of four lessons, as follows:

1. Yellow and red and the resulting hues of orange
2. Yellow and blue and the resulting hues of green
3. Red and blue and the resulting hues of violet
4. Yellow, red, and blue, as described above.

TINTS AND SHADES OF COLOUR

A Form II, Senior Grade class is expected to use two tones of one colour for colouring the work done in Design. The two tones may be the standard with a tint or shade, two tints, or a tint and a shade. The class should have learned in the previous Grades to make tints and shades with crayons, and the teacher will have no difficulty in getting them to realize that with water-colours a tint can be made by adding water to the standard colour, and a shade by adding a little black to the standard. The more water that is added the lighter the tint will be, the more black that is added the darker the shade will be.

Different tones of gray are produced from black in the same way that tints are obtained from a standard colour.

A sufficient quantity of the required tone should be made up in one of the depressions in the lid of the box. Directions for the application of this tone have been given already under "The Flat Wash".

DESIGN

The chief differences between the work in Design for a Form II, Junior Grade and a Form II, Senior Grade, are that the pupils in the latter are expected to measure in half-inches as well as inches for their constructive plan of squares. They may use a constructive plan of oblongs made by quartering the ends and sides of a sheet of paper and joining the points of division by horizontal and vertical lines, or of diamonds made by connecting the points of division with oblique lines. It is also taken for granted that they will use water-colours rather than crayons.

In addition to these changes, the Form II, Senior Grade pupil must consider his designs from a new point of view. The teacher who reads the text in Design for the preceding Grades will find that whereas the attention of the Form I, Junior Grade pupil was devoted to keeping the units of one size and shape and repeating them at regular intervals, the Form I, Senior Grade pupil went a step further and learned to make alternate arrangements of units, whereby he could see the effect upon the appearance of the pattern when the repetitions of the unit were comparatively far apart and when they were comparatively close. In Form II, Junior Grade, the pupil began to consider the size of the unit in relation to the background. He discovered also that it is possible to repeat some units in such a way as to make background shapes that add greatly to the beauty of the whole pattern. Now that he has reached Form II, Senior Grade, he should be taught to give careful consideration, not only to the size of the unit in relation to the space allotted to it, but also to the background shapes made by the touching, at certain points, of units, especially those that are geometric in character. Exercises such as the following one are calculated to teach the pupil to realize the importance of taking into account the background as well as the unit repeated upon it.

AN EXERCISE IN DESIGNING

The directions for the making of a geometric pattern suitable for a tiled floor or one of inlaid wood may be given as follows. Curved lines should not be used:

1. Draw two three-inch squares a half-inch apart on the 6″ by 9″ sheet of paper, arranging them so that the margins of paper at the sides and top are alike.
2. Draw light pencil lines dividing each square into nine one-inch squares.

3. Draw an inch square on a piece of practice paper and use the diagonals or diameters to help in planning a geometric unit that will touch the sides or corners of the square.
4. Repeat the unit obtained in this way in every square of the two constructive plans already prepared.
5. Clean out all unnecessary lines with a soft eraser.

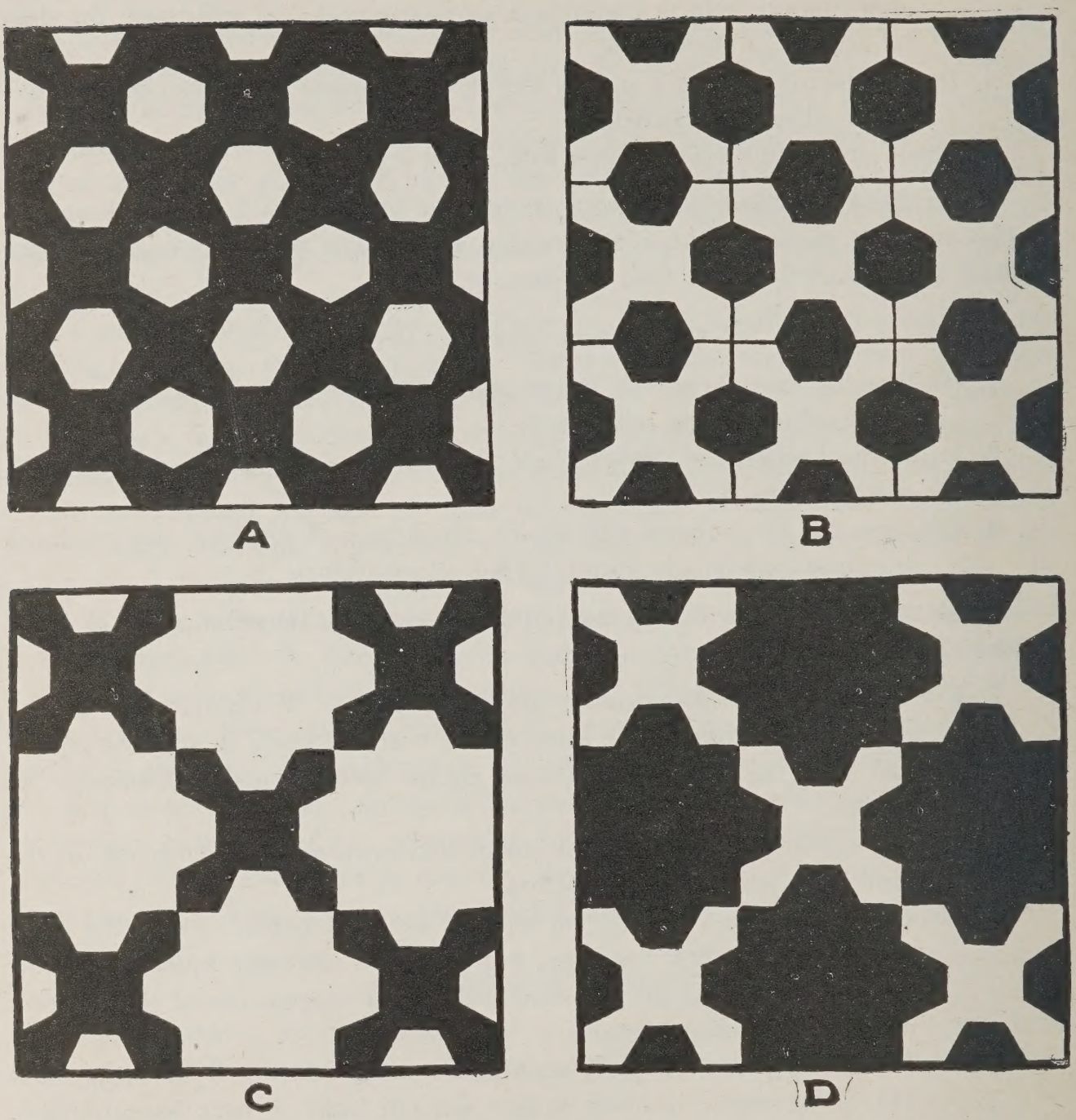
When these directions have been carried out by the pupil, he will have two surface patterns in outline that are exactly alike. The way in which they are finished will materially affect their appearance.

TO FINISH THE SURFACE PATTERNS

1. Outline the first three-inch square and paint the units black, using black water-colour or the school ink.
2. Paint the background shapes black, leaving the units white in the second three-inch square.
3. Compare the two squares and decide which way of finishing has produced the most satisfactory result. (See illustration.)

Other exercises that will help the pupil to realize the importance of the background shapes are as follows:

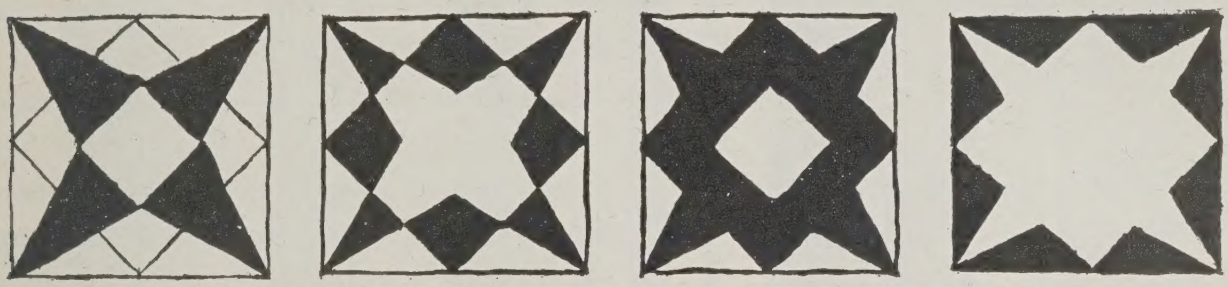
1. Put a pale wash of some colour over each square. When the wash is dry, put a deeper tone of the same colour over the units in the first square and over the background shapes in the second square. Compare the results.
2. Use one colour and black, or one colour and gray, or gray and black, in the same way, comparing as before.
3. Draw two three-inch squares on another sheet of paper. Draw the same unit as for the first exercises, but put it in alternate squares. Finish as before and compare the four different arrangements of the pattern, which are as follows:
   (*a*) Units placed in every square and made dark on light background
   (*b*) Units placed in every square and left light on dark background
   (*c*) Units placed in alternate squares and made dark on light background
   (*d*) Units placed in alternate squares and left light on dark background.



SURFACE PATTERNS

An exercise in designing a single geometric unit, two inches square or larger, might be given. From the results obtained, the class, under the direction of the teacher, should choose the most satisfactory example. The teacher should then draw a square on the black-board and, using the necessary constructive lines—diagonals or diameters or possibly both as the case might be—show the class how to construct the unit chosen. Each row might then be assigned one of the four ways in which the unit is to be arranged. The best example of each of the four different ways should then be put up for class criticism. Each pupil should decide which he prefers and give reasons for his preference.

This exercise would require at least two half-hour periods. The school ink would be a satisfactory medium for finishing the surface patterns in this case.



VARIATIONS OF THE SAME UNIT OF DESIGN—BY FORM II PUPILS

The steps to be taken in the foregoing exercise are:

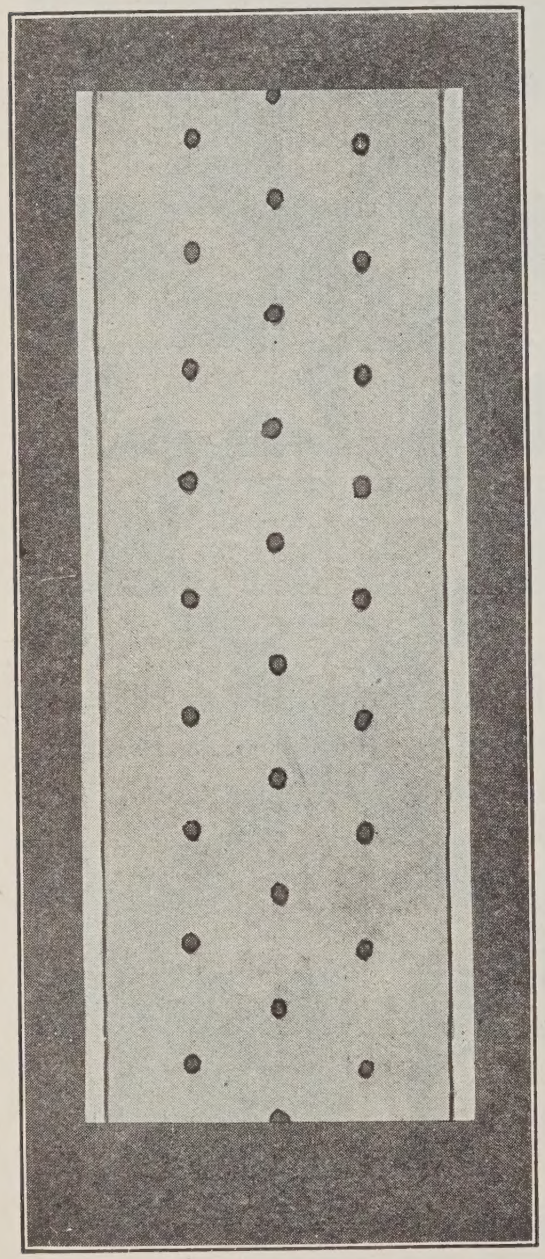
1. Designing of single geometric units by the class
2. Choosing the best unit
3. Demonstration by the teacher to show the best method of drawing this unit
4. Drawing and finishing of the surface pattern by the class in the four different ways (*a, b, c, d*), after each row has been assigned one
5. Choosing the best example of each method
6. Criticism by the class to determine which result of the four is most satisfactory.

VARIATIONS OF THE SAME UNIT OF DESIGN—BY FORM II PUPILS

In all of the preceding exercises the judgment of the class with regard to Balance is being cultivated.

INTERESTING PROBLEMS

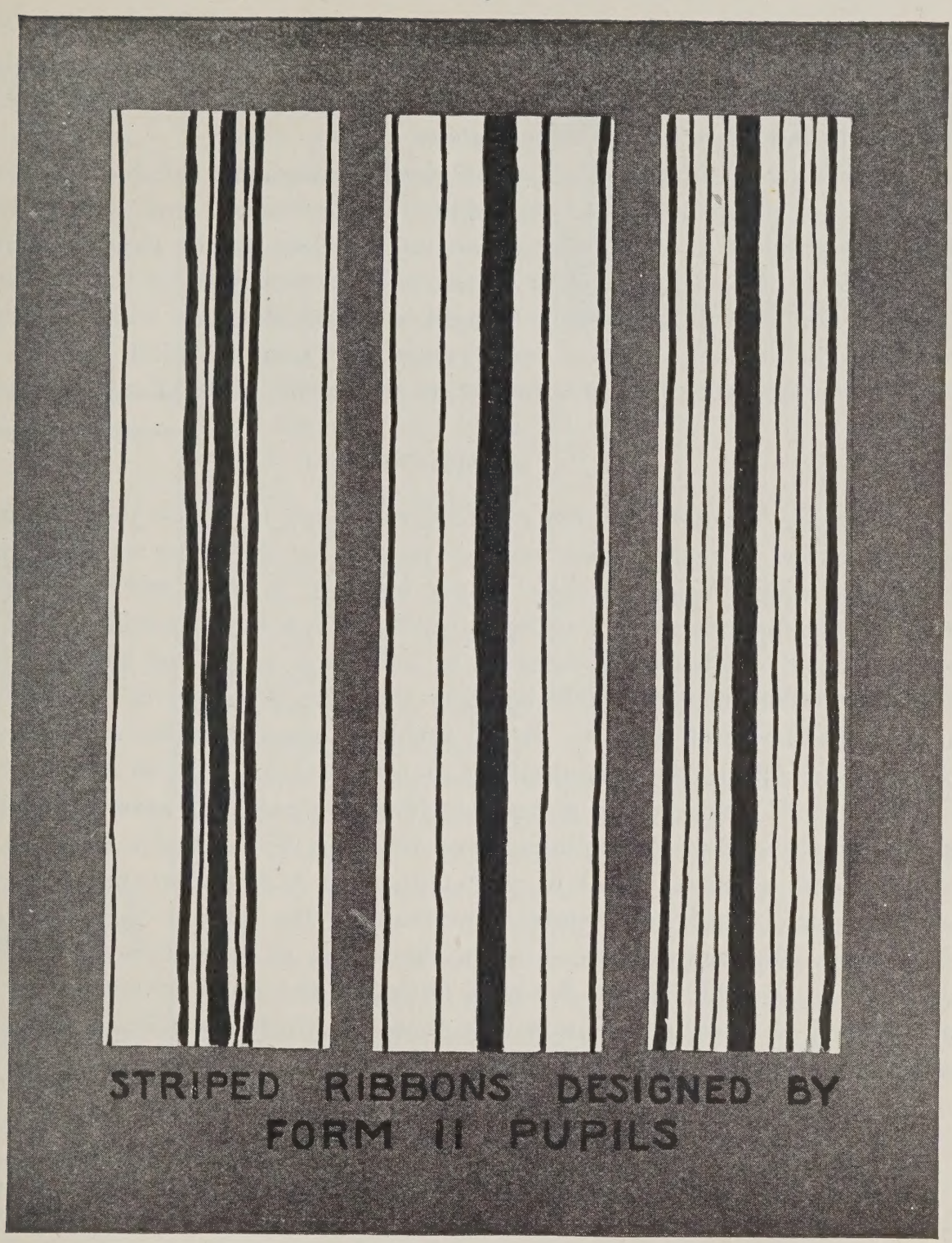
A problem that seldom fails to interest the small girl is the designing of a hair ribbon to harmonize with one of her favourite dresses. To do this she must proceed as follows:



RIBBON—BY FORM II PUPIL

1. Mark off the width she prefers in hair ribbons by drawing two ruled pencil lines from the top to the bottom edge of the paper, and the proper distance apart.
2. Decide whether she wishes a plain, a figured, or a striped ribbon.
3. For the figured ribbon she must next place dots as explained in the Form II, Junior Grade text. It may be necessary to begin at the middle of the top of the ribbon to mark the dots, in order to make the left and right sides of the ribbon alike.
4. Repeat the unit in pencil outline at each dot.
5. Put a wash of the desired colour over the whole surface of the ribbon space.
6. When this is dry, add a little more colour to the wash that is left over and paint the units, using a brush that is not too wet.
7. Draw a narrow line of the same or a little stronger tone of the same colour down each edge of the ribbon.

For a striped ribbon the same order should be followed but, instead of placing dots, it would be necessary to decide where to place each stripe and what width to make it. The stripes should be made with freehand brush



STRIPED RIBBONS DESIGNED BY FORM II PUPILS

strokes, and the width of the background stripes should be carefully considered. The ruler would be a hindrance rather than a help in drawing the brush lines.

While the girls are designing hair ribbons, the boys should design straight neckties for themselves after the same manner.

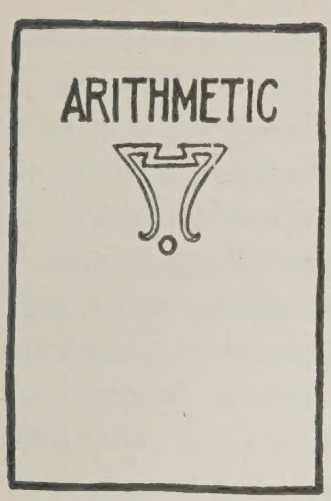
The designing of figured muslins and checked ginghams suitable for dresses for the girls, and prints or suitings suitable for blouses for the boys, will be found a fascinating problem in the Spring, when the attention in the pupils' homes is being directed to the setting in order of the summer wardrobe for the household. Many pretty samples will no doubt be brought to school, and these will give helpful suggestions; the teacher, however, must constantly keep in mind that, in the making of these patterns, the pupils cannot err on the side of simplicity.

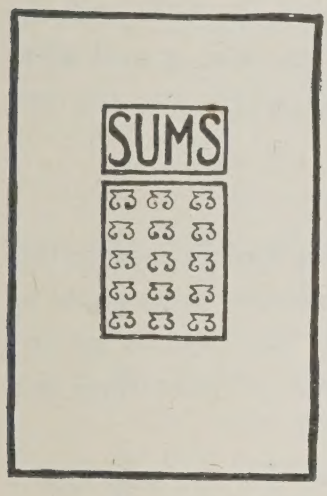
MARGINS

In Form II, Senior Grade, the pupils should begin to realize the importance of good margins. A margin may look too narrow for the paper or may appear altogether too wide. When an object is not intended to be viewed in a vertical position, all the margins may be of equal width, as in a handkerchief or rug, etc. When the object is intended to hang or be held in a vertical or nearly vertical position, the bottom margin should be wider than the others, as in the case of a picture, a calendar, or a booklet. In all problems where margins are necessary, the first steps should be the making of the margin, and the problem should not be gone on with until a satisfactory margin has been obtained. An exercise should be given occasionally calling for the drawing on the 6″ by 9″ paper of a marginal line that will inclose a central panel in good proportion to the surrounding margin. The central panel must not appear to overbalance the margin nor to be overwhelmed by it. Enough examples to show the variety of proportions made by the class should be brought forward for class criticism, and those exhibiting the best balance should be chosen by eliminating those in which the margin seems too narrow or too wide for the inclosed space.

PROBLEMS INVOLVING MARGINS

A rug, a couch cover, or other article of the kind may be designed so as to have a plain border with a figured centre or a figured border with a plain centre. A border across each end is also a satisfactory arrangement which may be used by this class, but it need not be considered here, as it has already been dealt with in

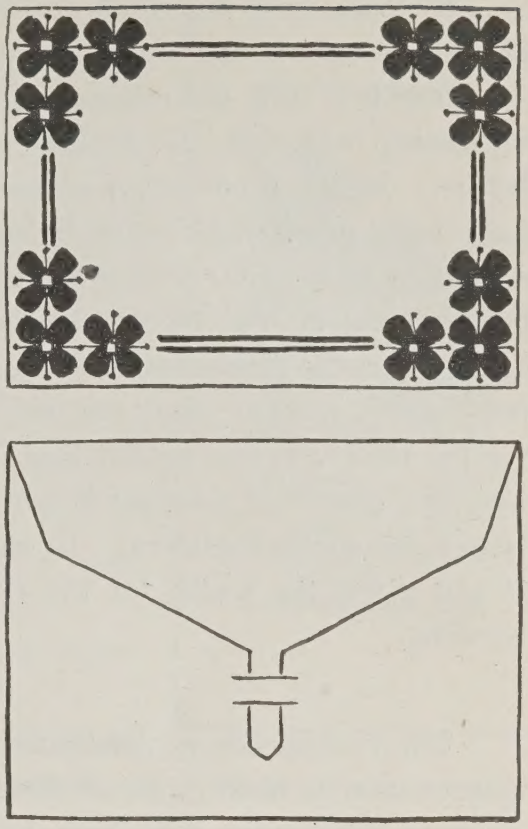




BOOKLET COVERS

Form I in connection with the towel problem. Other arrangements that would produce satisfactory results require a consideration of Balance and Rhythm too subtle for a Form II class.

The first step in working out the problem, after the rectangle for the rug or other article has been drawn, is the determining of the width of the surrounding margin that will be in good proportion to the inclosed rectangle.



DESIGN FOR PURSE

The second step is the measuring and marking into regular spaces of the margin or the central panel, according to whichever is to be decorated.

When the central panel is to be covered with a surface pattern, the constructive plan should be made by measuring from the centre of the panel to the sides, in order to have opposite sides and ends of the surface pattern correspond.

If the margin cannot be easily divided into an exact number of spaces for the units which are to form the border, the unit may be placed in each corner of the margin with, possibly, one or two repetitions at each side of it. These corner groups should then be connected by lines or by a strip or band. The purse in the illustration shows a border of this kind. The design may then be finished in black and white or in any combination of colours that has already been suggested.

Blotters, cases for court-plaster, and table mats, as well as the above-mentioned articles, should be made with margins or borders that are uniform in width.

Booklets and calendars, both of which look better for having the margin noticeably wider at the bottom than at the top or sides, have been referred to before. In the preceding Forms, different arrangements for the covers of booklets have been given that could be carried out by a Form II class. In the booklet covers on page 145, the first step, after a decision as to the style of decoration had been arrived at, was the drawing of a light marginal line that would give margins of satisfactory proportions when compared with the central panel. In the first book cover, the marginal line was erased after it had given the placing and width for the title. In the second case it remains, but the central panel has been divided into two panels of unequal height, the smaller of which contains the title and the larger the surface pattern. In the third cover, the marginal line was erased after it had given the width for the title space and the placing and width for the two borders.

UNITS OF DESIGN

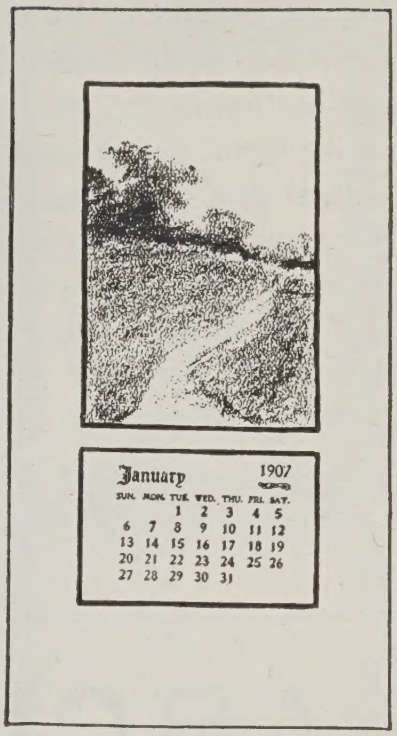
The booklet covers illustrated above suggest a way in which figures and letters may be used to make units of design. The units in these illustrations were made by drawing the figures with both hands at the same time, using two pencils or two crayons. The left and right figures were then connected by one or more lines and in one case certain parts were darkened.

Except in rare cases, the units of design used in this class for the making of borders and surface patterns should be simple geometric forms, or suitable leaves, or the top or side views of flowers after these have been simplified as much as possible.

CALENDARS

The calendar problem could be approached in the same way as the booklet cover if calendar pads of any desired size could be procured but, since that is not the case, it is necessary to begin with the central panel, the width of which is governed by the width of the calendar pad, and plan the margins afterwards. The pad having been procured, a picture of the same width but different height should be cut from the best part of some suitable landscape made previously by the pupil. The landscape and pad should then be placed in position on a sheet of mounting paper of some dull tone that will look well with the picture or, failing that, on a sheet of drawing paper. The picture and pad which go to form the central panel

should have sufficient space between them to show that they form two separate parts of the one panel; the space separating them, however, should be noticeably narrower than the margins which are marked off next and should be made of such a width as to be in good proportion to the central panel. Unless the bottom margin is made a little wider than the margins at the sides and top, the calendar pad and picture will have the appearance of slipping down on the mounting paper.



MAKING THE CALENDAR

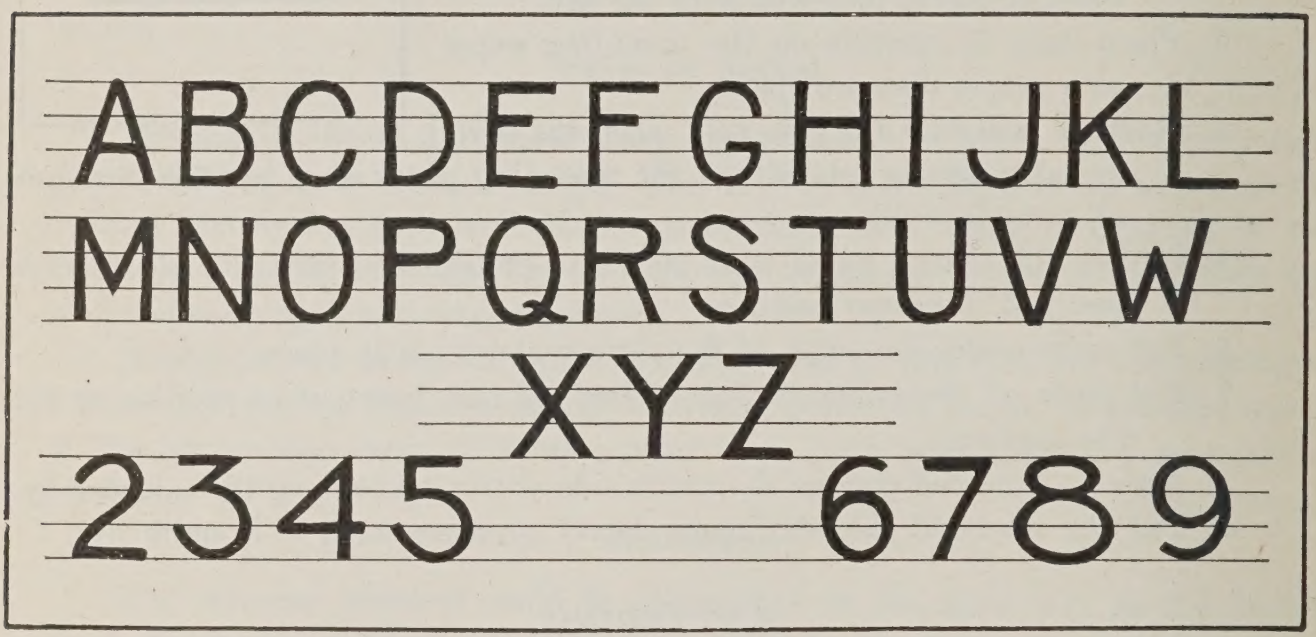
1. Procure the calendar pad.
2. Cut the picture of the same width and of sufficient height to look well with the pad.
3. Place these in position on the mounting paper at a proper distance apart.
4. Mark off tentative margins and, when the parts are all properly related, cut the mounting paper so as to allow margins of suitable width.
5. Outline the central panel with pencil, to ensure the pasting of the picture and pad in proper position.
6. Put paste under the edges of the picture and fix it in place.
7. Put paste on the under surface of the pad and fasten it in position under the picture.
8. Fasten a gummed ring on the under side at the top to hang the calendar by.
9. Put the mounted calendar under heavy pressure until it is quite dry.

LETTERING

The Form II, Senior Grade pupil is not required to learn anything new in lettering, but better results should be expected here than were looked for in the Junior class. He may also make more use of the ruler and, although practice between the lines on foolscap paper should not be given up entirely, he may rule a space of given dimensions on a sheet of drawing paper and try to make the letters in a word occupy this space. To do this he should first draw a light vertical line through the middle of the space to be occupied by the word. If the word has an

uneven number of letters, the middle letter should be placed exactly on this line and made the proper height. The letters may then be placed in order from it to the beginning and the end of the word. If there is an even number of letters in the word, the two middle letters should be placed first, one on either side of the central line. As I takes less space than any other letter, an I in one half of the word and not in the other would make it necessary to place the central letter or letters slightly nearer the side in which I occurs.

The Easter cards by Form II girls were lettered in the way indicated above. The letters were first made with very light pencil lines. The colour was then put in with a brush over the pencil lines.



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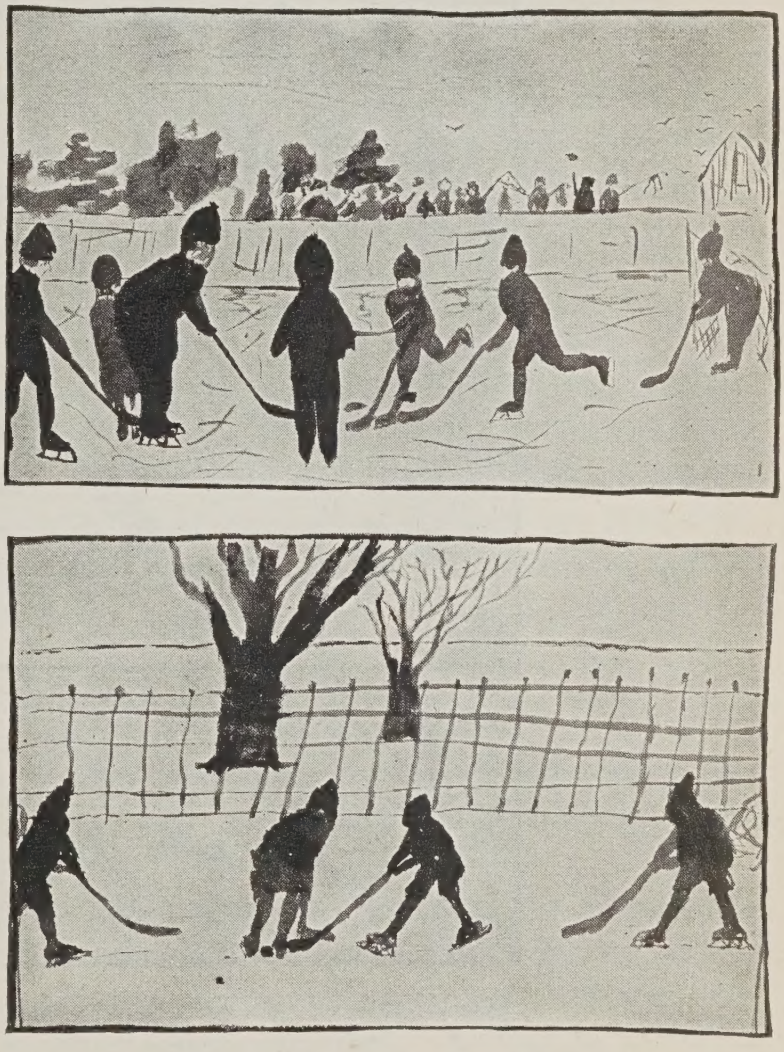
CHAPTER X

FORM III, JUNIOR GRADE

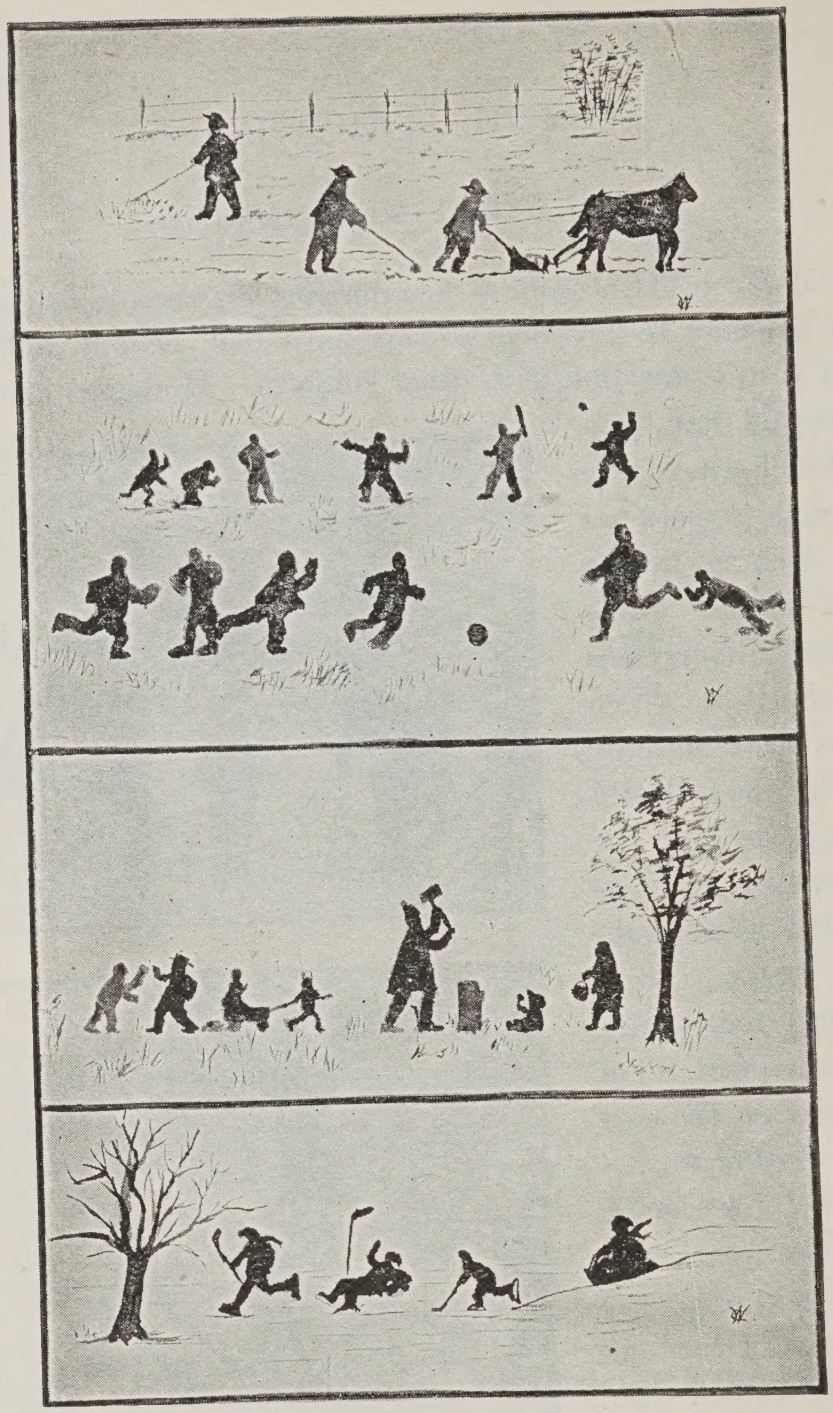
ILLUSTRATIVE DRAWING

THE TEACHER of Form III, Junior Grade, having less time to spend on Illustrative Drawing than teachers in previous Forms have had, should endeavour to make frequent use of it in connection with other subjects. Drawings made by the pupils to illustrate events and conditions with which they have had no personal experience will be found lacking in the vivid life and action which characterize the illustrations of games and sports in which they themselves have actually taken part. This fact should not discourage the use of Illustrative Drawing in connection with other school subjects however, because even the very imperfect representation of a situation will serve to make it clearer to the one endeavouring to picture it.



A WINTER GAME—BY FORM III PUPILS

For the six or more periods during the year that may be devoted to special lessons in Illustrative Drawing, subjects should be chosen that will give the pupils an opportunity to exercise what they



THE FOUR SEASONS—BY A BOY IN THE INSTITUTE FOR THE DEAF AND DUMB, BELLEVILLE, ONTARIO

have already learned in lessons in Representation. After animal study, for example, such descriptive lines as:

> Up leaped of a sudden the sun,
> And against him the cattle stood black every one,

might be illustrated. Landscape drawing should precede these special lessons, as the pictures of games and sports will require suitable landscape settings.

REPRESENTATION

In the preceding Forms, grasses, flowers, and similar sprays from nature have been handled chiefly in ink or charcoal mass, or in coloured crayons. Specimens of this kind may be expressed in Form III, Junior Grade, in ink tones or in water-colours.

INK TONES

In Form III, Junior Grade, the best method of procedure in making a drawing in ink tones would be to have each pupil put sufficient ink into a small quantity of water to make a wash for the light tone required; with this he should then make a careful silhouette of the specimen and, when this is dry, go over the parts that are to be made dark, with undiluted ink. (Black water-colours may be used instead of ink.) See illustration on page 152.

THE HANDLING OF WATER-COLOURS

It will be noted that two methods of handling water-colours in Representation are given in the Manual. The artist, as a rule, makes use of both in almost every sketch.

Where a large mass of colour of an almost even tone occurs, it is a convenience to have a pool of colour prepared in one of the depressions in the lid of the paint-box. As this colour is being applied to the paper, clear colour from the cakes may be added to give any variations that occur in the hue. Where the specimen or model that is to be painted has no large surfaces, the colour may be taken directly from the cake after the manner indicated in the second exercise on page 117, and also in the following lesson on the nasturtium.

THE NASTURTIUM IN WATER-COLOURS

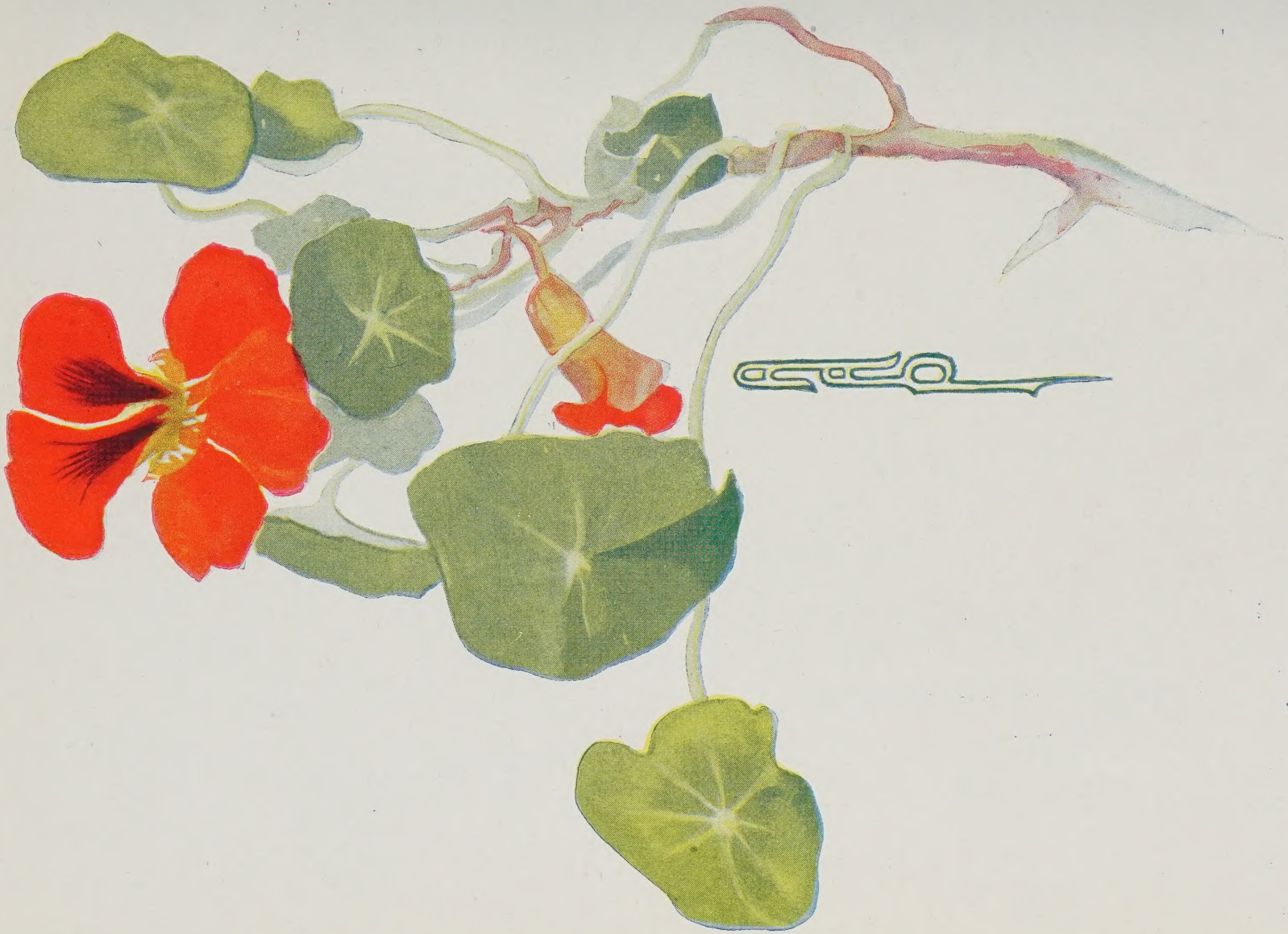
MATERIALS

For each pupil, a spray of nasturtium with stem, leaves, and blossom, two sheets of drawing paper, three-colour paint-box, clean cotton cloth, brush, and water pan.

DANDELION, IN INK TONES

PREPARATION

The paint-box is placed at the back of the desk at the pupil's right with the opened lid toward him, and the paints are moistened before the study of the



specimen begins. The nasturtium is then laid in a natural position on one sheet of the drawing paper, which is placed on a book or slate at the left side of the pupil and against the back of the desk, so as to slant slightly in order to give him a good view of the flower in the position in which it is to be painted.

Where it is not possible to obtain sufficient specimens for each member of the class to have one, the flowers may be placed in bottles or in jars of wet sand on boards placed across the aisles from desk to desk. A dozen specimens placed in this way are sufficient for about fifty pupils. Where each pupil has a specimen of his own the results are likely to be more satisfactory.

METHOD

When the specimens are all arranged, the attention of the pupils should be called to the shapes of flower, stem, and leaves. They should notice the difference in appearance of edge and face views of the leaves. The joining of smaller stems to the parent stem should be observed carefully, as should also the general character and direction of these stems. One leaf may hide parts of two or more other leaves; the pupils should note the general shape of such groups and the relative position of leaves that show separately.

Having studied the shape and growth in this way, the class should proceed to analyse the colour. The hues of flower, stem, and leaves are found in the colour charts which the pupils have made previously. In the case of the nasturtium, the flower showed hues ranging from yellow-orange to red-orange; the markings were brown in a shade of red-orange. The stems were tints of green and blue-green and, in one side of some of them, a tint of grayed red appeared. In the leaves, the hues ranged from yellow-green to blue-green. The teacher should fasten a sheet of drawing paper up at the front where all can see it and on this indicate the first steps. It is not necessary to finish this drawing but, as the lesson proceeds and difficulties are discovered, the class may be shown on the same sheet of paper how to overcome these difficulties.

First, the brush is filled with water, brushed once across the yellow cake, twisted to a point in the lid of the box, and a faint, narrow line is swept in for the direction of the main stem. With the same very pale yellow, the angle at which each stem joins the parent stem is indicated with a light line. These yellow lines should be so pale that they will not show in the finished drawing. The brush is now filled with yellow and red, lightly twisted once in the lid so that the colours

will run up into the brush and blend, and the two upper petals are painted. If the first touch of the brush to the paper shows too yellow a hue, more red is immediately added to the brush or, if too red, more yellow is added, and the upper petals are completed. If the brush is too wet, it is allowed to touch the cloth or a piece of blotting-paper, that some of the moisture may be absorbed. To dry the brush would be to begin all over again with the same difficulties and to waste paint.

The lower petals are next painted, leaving a narrow space between them and the upper petals. The fringe, yellow or red as the case may be, is added before the flower petals are quite dry. For the brown markings the brush is filled with strong yellow and red and a little blue, twisted in the lid to a good point, and the lines are then painted into the upper petals when they are almost dry. The brush must be held vertically for these lines.

The brush is now dried and cleaned and the tops of the yellow and blue cakes cleaned if necessary. The nearest green leaves are next painted. The brush is filled with water, brushed across the blue and yellow cakes, twisted in the lid, and the leaves shaped rapidly on the paper without outlines. More yellow or blue or water is added to the brush, if necessary, to produce the right hue. A tiny spot of white paper may be left in the centre of any leaf where it shows prominently. The brush is dried, to wipe the veins from the centre out, before the leaf has time to dry. The under sides of leaves are painted, after the upper edge is dry, with paler colour made by adding more water to the brush, as also are the stems. The main stem is painted last, in between the stems that join it. While the green of the stem is still wet, a little red is touched in where the stem shows pink. Where one side is very dark, a little blue is added.

The transparent appearance of the stems is obtained by using more water than colour in the brush.

After an exercise like the second on page 117, the painting of any flower in this way should not be difficult.

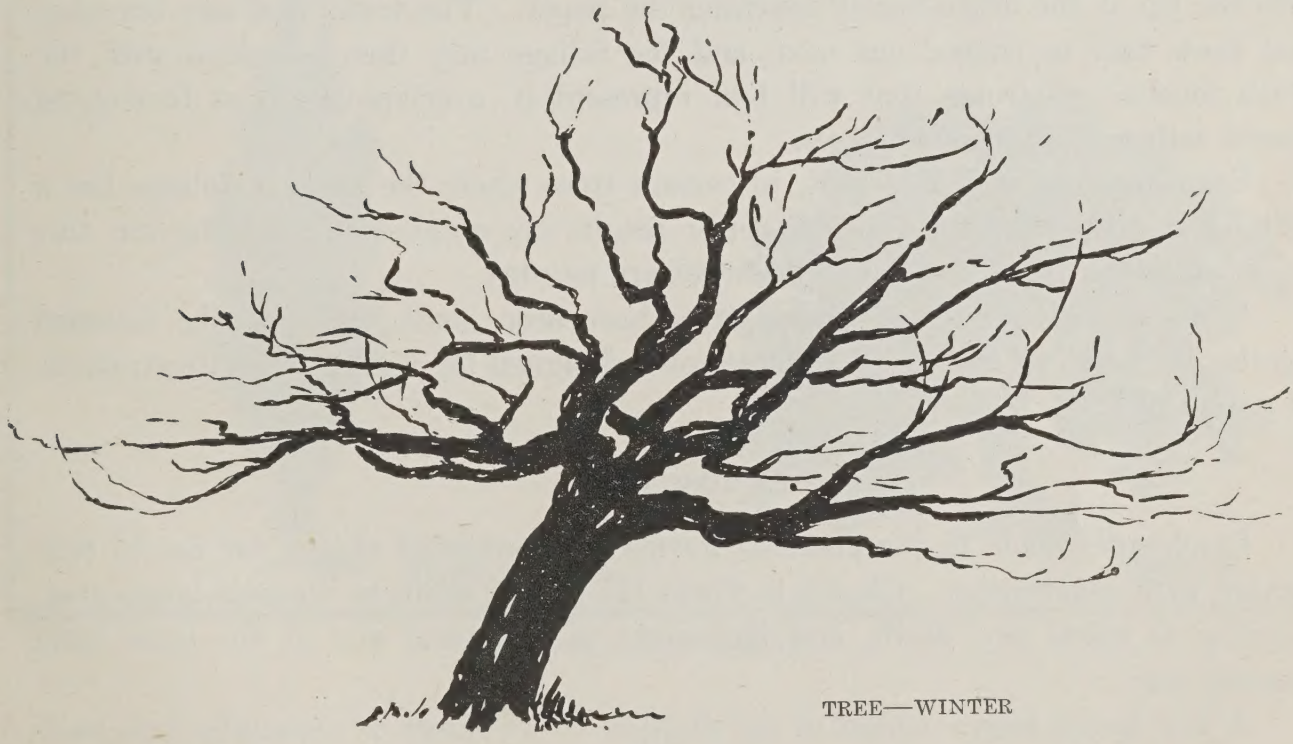
FRUITS AND VEGETABLES

Fruit sprays may be handled in a similar manner. Further suggestions regarding the drawing of fruits and vegetables are given in the Manual.

TREES

Instructions have been given in Forms I and II with regard to teaching the drawing of various trees. Similar methods may be used with a Form III class.

TREE—SUMMER



TREE—WINTER

The points which each pupil must observe in studying a tree are:

1. The main direction of growth
2. The proportion of the length of the trunk to the whole height of the tree
3. The width of the trunk as compared with the greatest width of the upper part of the tree
4. The character of the branching
5. The general shape of the upper part of the tree.

Pencil should be used frequently as the medium for the representation of trees in Form III, and it will be found necessary to give some practice in trying to develop the power to express foliage in simple masses. Illustrations are shown of an apple tree in full foliage, rendered in pencil, and a brush and ink drawing of the same tree in Winter.

TREES IN SILHOUETTE

Silhouettes, or ink paintings, of trees are made in much the same way as the grasses on page 115 were painted. A light line for the direction is first swept in with the tip of the brush barely touching the paper. The trunk and any branches that show may be shaped out next, and the foliage may then be added with the brush touches or strokes that will best represent it, overlapping so as to suggest masses rather than separate leaves.

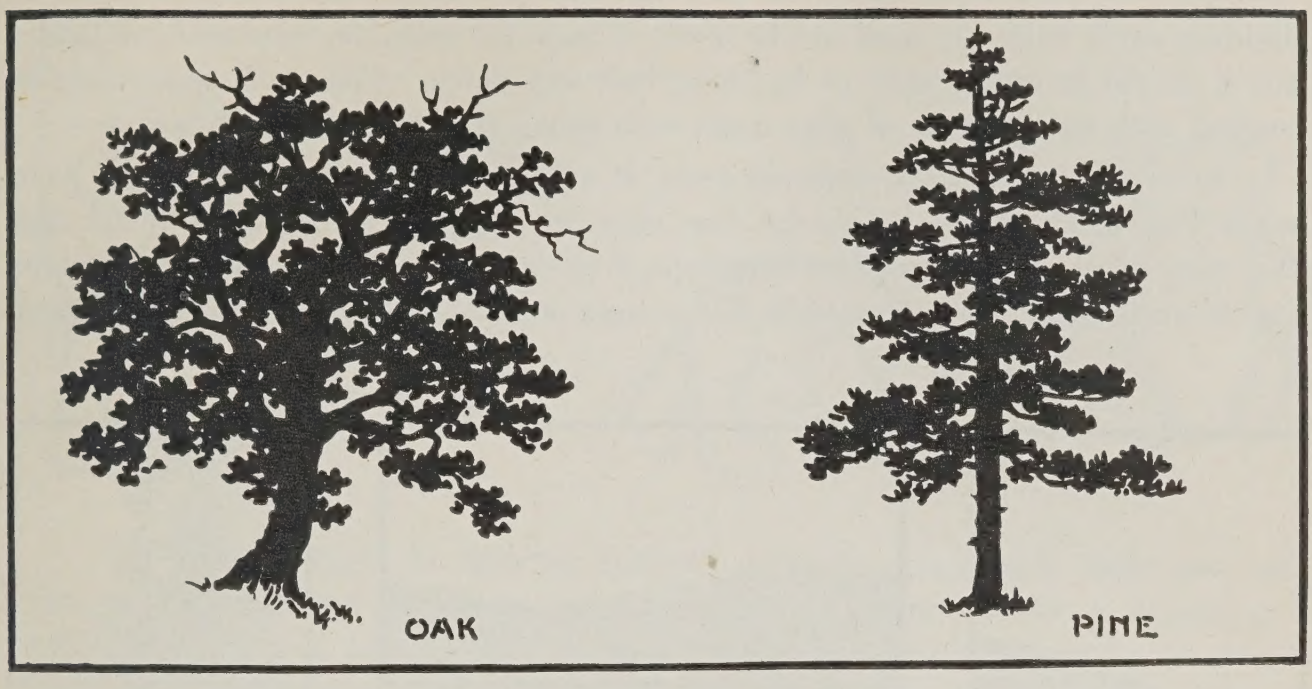
Some teachers may find that, in certain trees where the mass of foliage has a striking and clearly-defined shape, better results are obtained by shaping out this mass before the trunk and lower branches are painted.

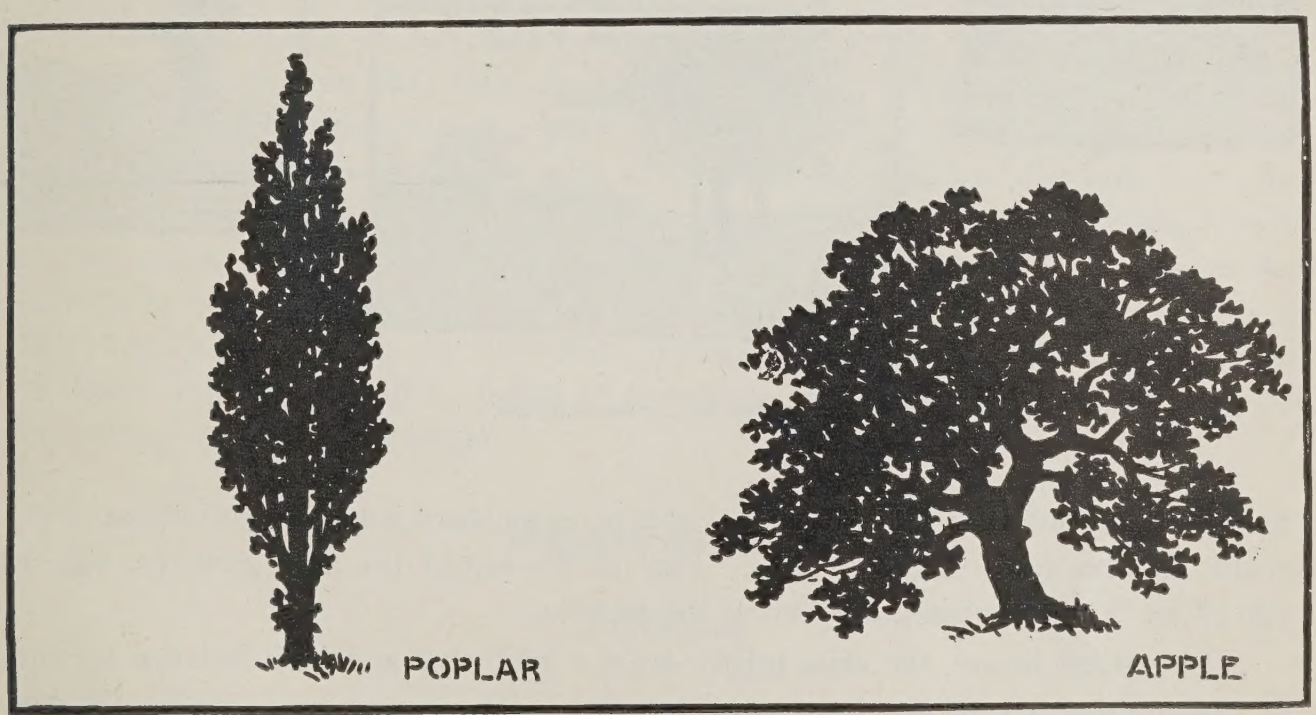
When the silhouettes of several trees have been made, they may be fastened together in booklet form and a suitable cover designed for them. (See illustrations on page 123.)

LANDSCAPES

Landscapes made in the previous Forms were intended chiefly for use in connection with illustration. Classes in Form III should begin to compose landscapes, learning to relate sky, earth, and tree areas in a natural and at the same time pleasing way.

A first lesson might consist of the division of a number of rectangles into well-proportioned sky and earth spaces. These spaces should not be equal. The line

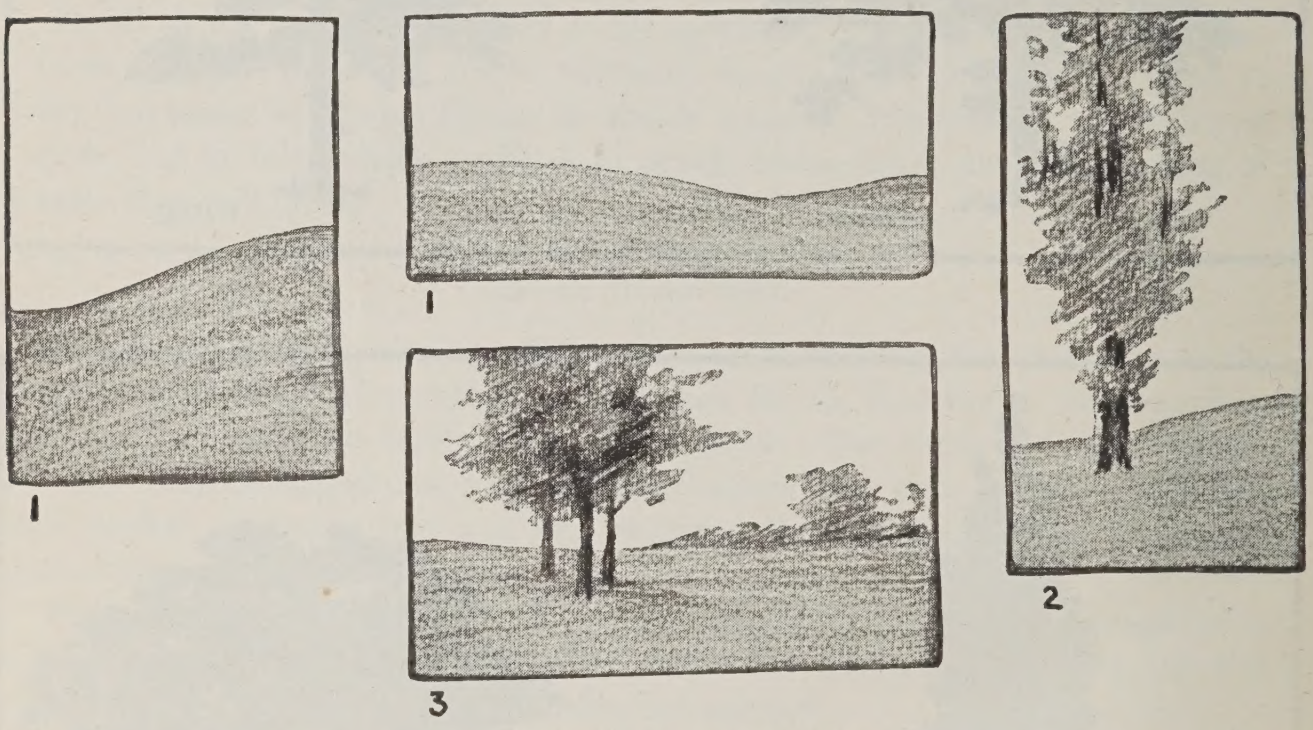




TREES IN SILHOUETTE

dividing earth from sky need not be level; it may, for example, represent a hillside, but it should be either more or less than half-way down. The earth space may be covered with an even tone of gray made with pencil strokes laid close together.

After the pupils have observed trees at a little distance from them and have noted how much of the particular tree they are studying comes against the sky, they may place a single tree in a landscape so as to produce good spacing. The tree should not be exactly in the middle nor so near one side as to make that side appear

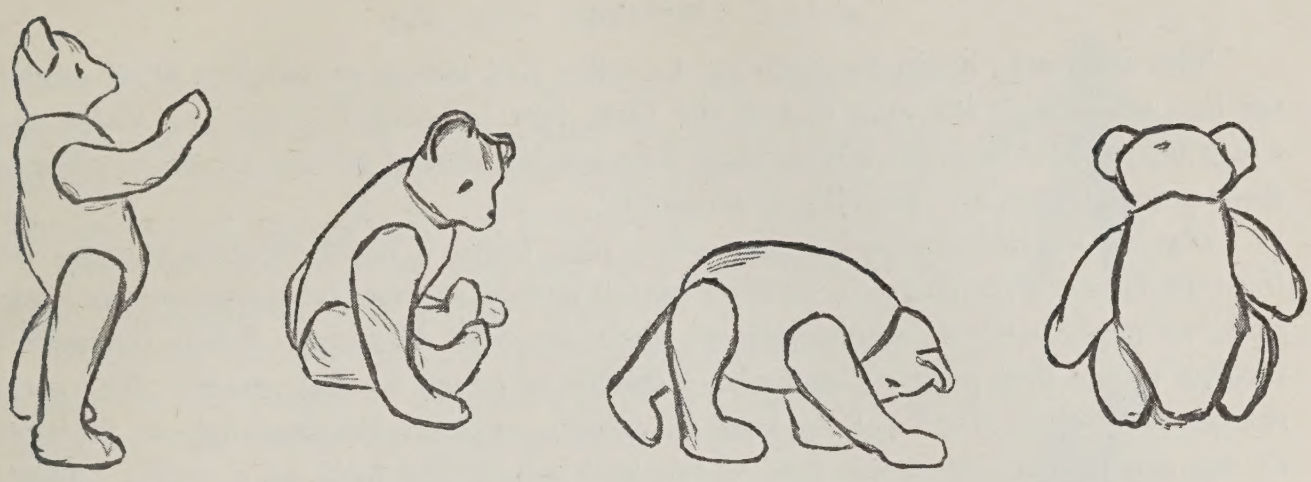


LANDSCAPE COMPOSITION

heavier than the other. There should also be some space between the bottom of the trunk and the lower marginal line. Part of the top of the tree, however, may be cut off by the upper marginal line of the picture.

In a third lesson, the class might draw a landscape and in it balance a group of two or three trees in the foreground by a low-lying mass of woods in the distance.

This series of lessons, which is planned in pencil, may be carried out in ink, neutral values, water-colours, or coloured crayons. Illustrations of landscapes in these mediums will be found in different places throughout the Manual.



The pupils delight in drawing domestic animals, particularly their own pets. One of the class may be able to bring a canary, a bantam rooster, a pigeon, or a rabbit to serve as a model. A first lesson from one of these should be devoted to sketching it in charcoal, crayon, or pencil, in various positions, making a number of rapid sketches on the same sheet of paper.

The movements of the model will suggest a variety of poses which at first seem difficult to draw, but there is less drawing than watching necessary, and the class should not endeavour to record more than a side view of the animal and possibly a front and a back view with sketches of the head and the feet in various positions. They should observe the model as it lingers a moment in action, rapidly sketch a line or two, and add more lines to the sketch as often as the animal returns to the original position. A number of unfinished sketches may be made in this way, while seeking for the most typical appearance of the animal. These recorded impressions will be found of assistance in future drawings of the animal in connection with illustration.

LESSONS ON BIRDS

MATERIALS

A canary, a pigeon, or a bantam rooster; some seed or crumbs to keep the model from wandering from the teacher's desk; pencils and drawing paper.

METHOD

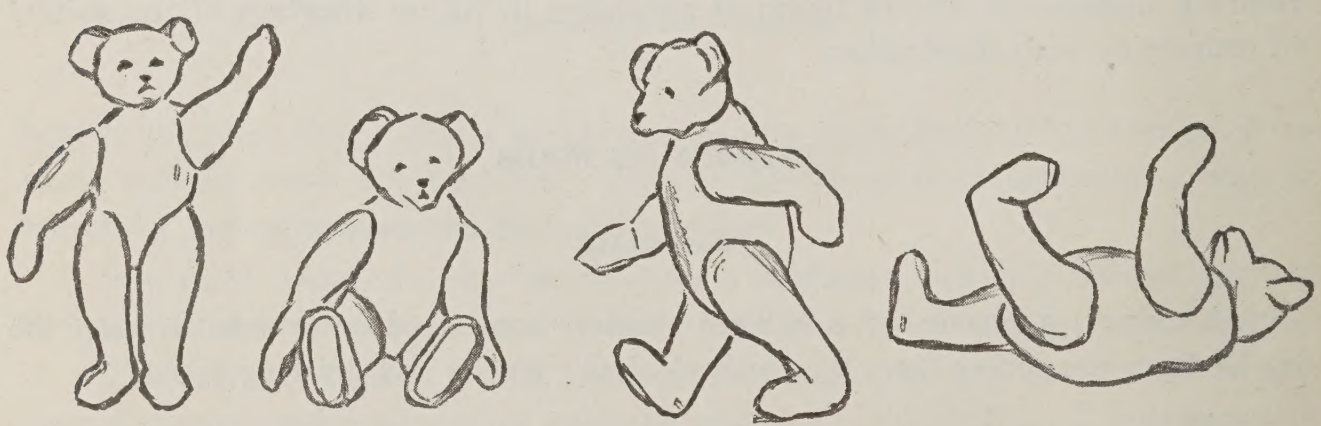
The class may begin by studying how the bird stands or perches, what angles the legs make with the long line of the back, how far back the legs are, where the wings begin, how long the bill is, etc. The teacher should get the pupils to observe these points before any drawing is attempted.

Having studied the proportions, they may begin a rapid freearm sketch. If the bird changes its position, another sketch should at once be begun on the same sheet of paper without attempting to alter the first drawing. When the model returns to the first position, more lines should be added to that sketch. The class should make other studies of the head in various positions, determining the position of the eye by extending the line of the beak across the head as a guide. These rapid sketches should be in outline. The pupils should not be allowed to erase in lessons of this kind; instead of correcting mistakes they should begin a new sketch on the same sheet of paper.

Another way of conducting this lesson would be to have the class study the bird carefully, watching it in its different poses without attempting any sketches until after the model has been removed, when it may be drawn entirely from memory. The bird may then be brought back and, when the drawings have been compared with it and corrected, a new drawing may be made.

If the latter way of conducting the lesson be chosen, ink paintings in mass may take the place of the pencil sketches.

When live birds or animals are not obtainable, mounted specimens may take their place. Toy models may also be used. The Teddy bear admits of many changes of position and the drawing of it makes a good preparation for drawing from live animals.



DRAWING FROM THE FIGURE

The work in drawing from the Figure in Form III, Junior Grade, should be very similar in method to that described in Form II, Senior Grade, but greater accuracy in observation and expression should be required.

The work should be in mass and most frequently from memory immediately after careful class study.

When the model is posed, the attention of the class should be called to the height of the figure in comparison with the width, the place where the greatest width is, the position of the feet with regard to the head, and the length of arms and legs as compared with the whole height. The head may be used as a unit of measurement. It will be found that the taller the child is the oftener the head measures into the whole height.

The child should be posed in some interesting position, it may be to express an action such as sweeping, dusting, pulling, pushing, reaching, fishing, reading, etc.

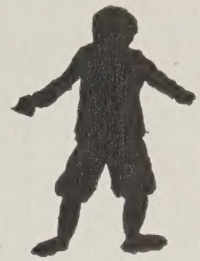
When a child is posed to represent an action of this kind, a line to show the general direction the figure takes may be put in first, and the figure shaped out on it.

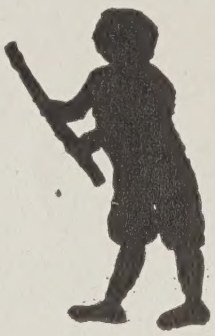
The best medium to use in Form III, Junior Grade, in drawing from the pose, is charcoal or ink.

DRAWING FROM MANUFACTURED OBJECTS

In the preceding Forms, almost all of the object drawing has been done in mass. The importance of outline drawing, however, should not be underestimated and, in Form III, emphasis should be placed on it; but, until a class is able to make satisfactory mass drawings, it is useless to undertake outlines which are merely the boundaries of mass; therefore, before undertaking the drawing of objects in outline, the power of the class to express in mass should be tested.

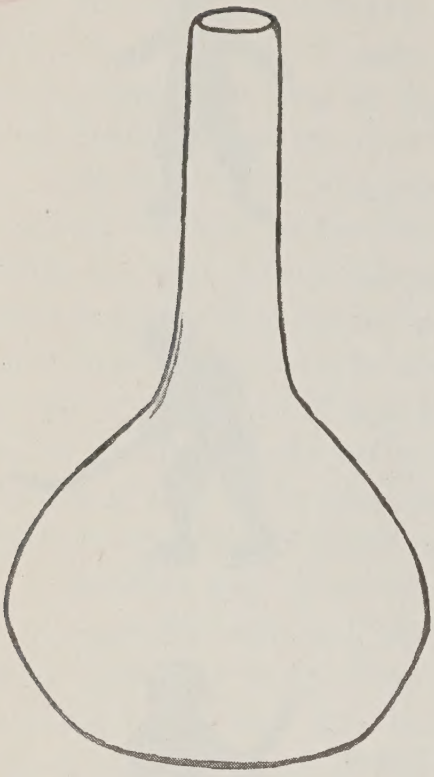
In all outline drawings, whether the outline is to be the finished drawing or is merely a step in the process of making a decorative composition, the boundaries should be lightly blocked in.

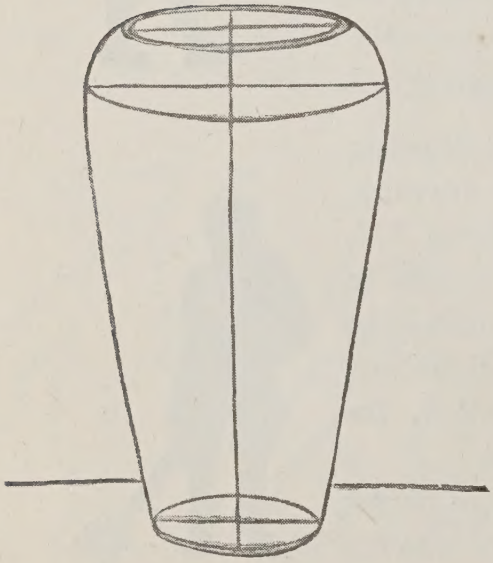




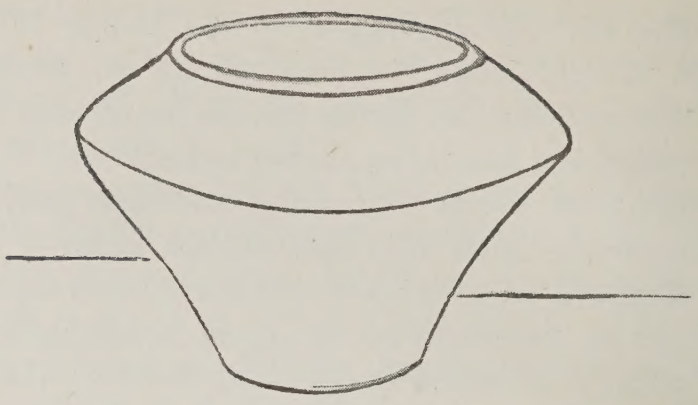
MASS DRAWINGS IN INK —BY FORM III PUPILS

PENCIL MEASUREMENT





OUTLINE DRAWINGS—BY FORM III PUPILS



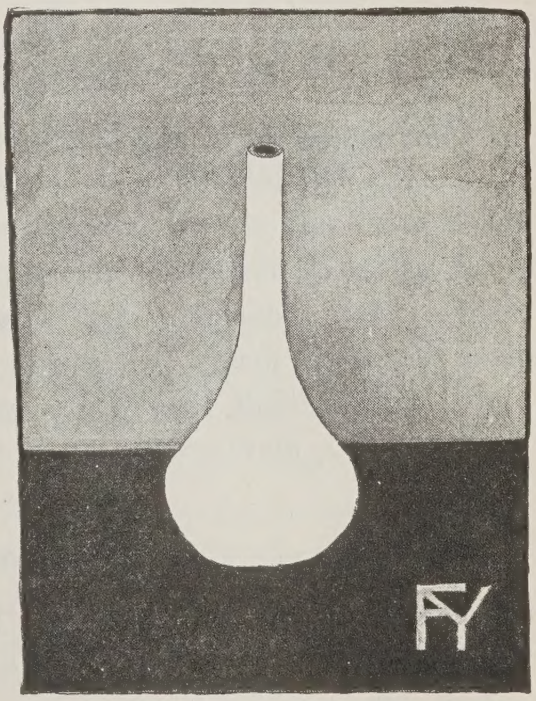
Pupils should be trained to judge the proportions of objects and to test this judgment by pencil measurement. If they judge without testing, this judgment is likely to degenerate into mere guess work; if they measure without first judging, the eye is not being trained.

To take a measurement on the pencil, the pupil should sit well back in his seat with one eye closed and, holding the pencil at arm's length in such a position that it will incline neither toward nor from him, slowly raise it until its top appears to come even with the top of the object being measured. He may then slide his thumb up or down the pencil until the thumb appears to come even with the bottom of the object, while the top of the pencil is in the first position. Holding this measurement and keeping the pencil still parallel with the face, he may swing it around so as to bring the end with the left side of the object and enable him to tell how much the one dimension is greater than the other. It is better to measure the smaller dimension first and then see how many times it is contained in the larger.

Pencil measurements give the proportions of objects, not the size the drawings should be made. Pupils may be given practice in judging and measuring the proportions of rectangles drawn on the black-board, also various doors, windows, and wall spaces in the room, before attempting to determine the more subtle proportions of objects of three dimensions.

BLOCKING IN

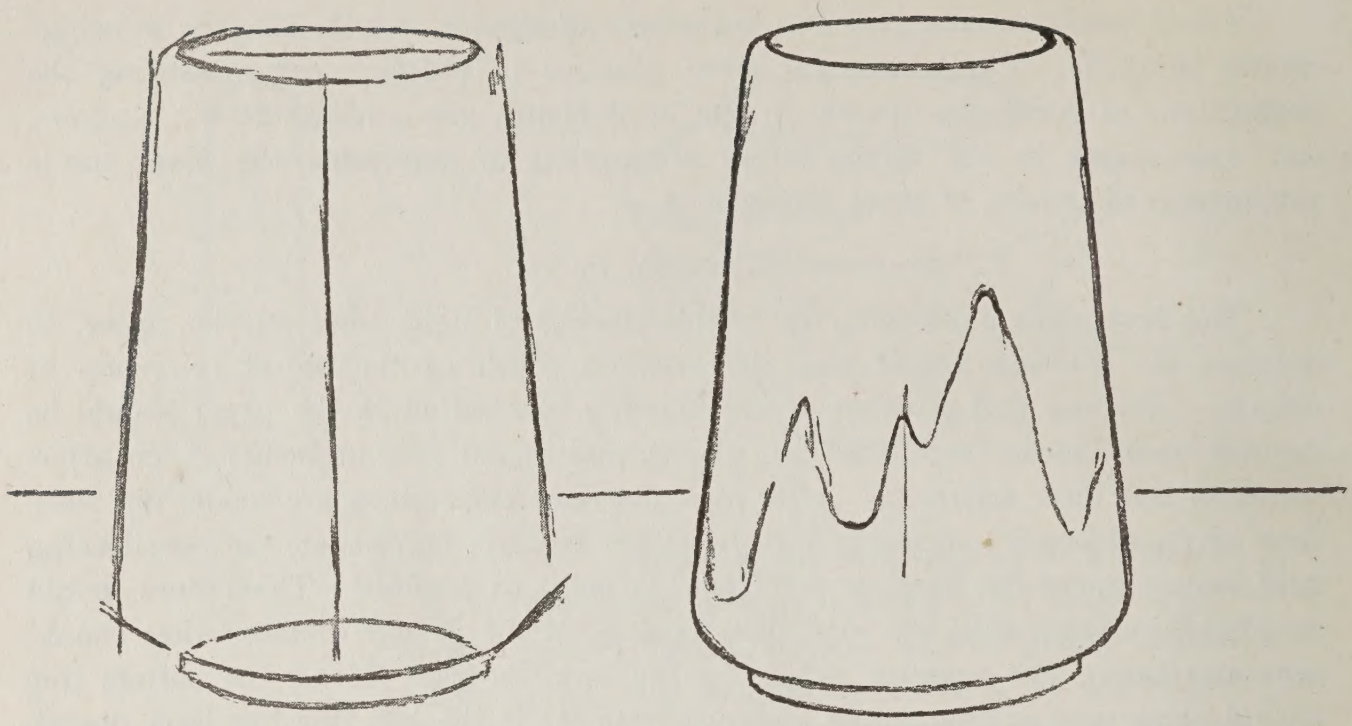
The first step in blocking in is the placing of light lines on the paper, to indicate the greatest height and the greatest width of the object or group of objects. The size and position of the drawing best suited to the paper should be decided upon before these lines are placed, and pencil measurements taken afterwards to test their accuracy. After any necessary corrections are made, the main lines of the object are swung in lightly with a freearm movement, the pencil being held loosely under the hand as far from the point as possible. These lines should be placed in pairs with the attention fixed upon the proper distance that should separate them. For example, when the top line has been placed, the bottom line should come next at the proper distance from it; if the left line has been placed, the right should follow immediately. In a similar way all the parts of an object should be blocked in, the lines in every case being so light as to require no erasing, although in feeling for the correct shape a number of trial lines may have been made. The quality of line which is used in the strengthening of this outline may suggest the materials of which the object is made.



DECORATIVE COMPOSITION—BY FORM III PUPIL

THE TABLE LINE

To give an object the appearance of stability in a drawing, it is necessary to suggest a level supporting surface. For this purpose, when the object is below the eye level, a table line which stands for the back edge of the surface on which the object rests is usually added and should be light enough to suggest that it is at some distance from the object. It should not have the appearance of dividing in the middle either the drawing or the rectangle in which it is drawn. The placing of the table line is a matter of good composition.



BLOCKED IN ACCENTED PENCIL OUTLINE

"The quality of the line used may suggest the material of which the object is made"

DRILL IN DRAWING PENCIL LINES

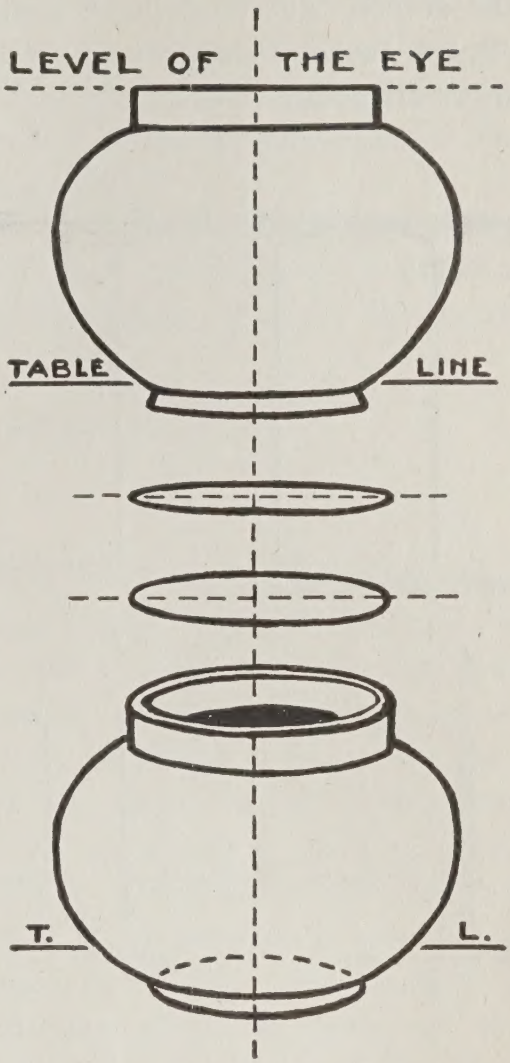
For pencil lines, the pencil should be sharpened so as to have a long slant of wood; very little lead need be exposed, and the point should be rounded, not sharpened. To ensure freearm movement the pencil should be held under the hand, as far as possible from the point, and always at right angles to the line being drawn. The movement should be slow and controlled, and the left hand should hold the paper firmly in position. Horizontal lines should be drawn from left to right, and vertical lines from top to bottom. Occasional drills will enable the pupils to gain more rapid control of the pencil.

THE FORESHORTENED CIRCLE

Up to the present, attention has been directed to the shape and proportion of objects. In Form III, the position in relation to the eye level must be carefully considered; this entails the drawing of foreshortened surfaces.

A large hoop of heavy wire or other firm material is an excellent model to keep for teaching the foreshortening of the circle. The teacher should stand on a chair or elevation that will raise him well above the pupils, who should also stand while the teacher raises the hoop above their heads, keeping it perfectly level. They can now see up into the hoop and should be led to realize that the back edge, that is, the edge farthest from them, appears to be some distance below the front edge. The hoop is then slowly lowered, each pupil sitting down when for him the back edge is hidden by the front edge and the circle appears as a straight line.

By this method each pupil has an opportunity to see exactly what does take place in the appearance of the circle when it is brought from above the level of the eye to the eye level. To be certain that each realizes the appearance below the eye level, it will be necessary to take groups of eight or ten pupils at a time and have them stand and watch the hoop, as it is lowered from above the eye level till the back edge disappears behind the front edge to reappear above it.

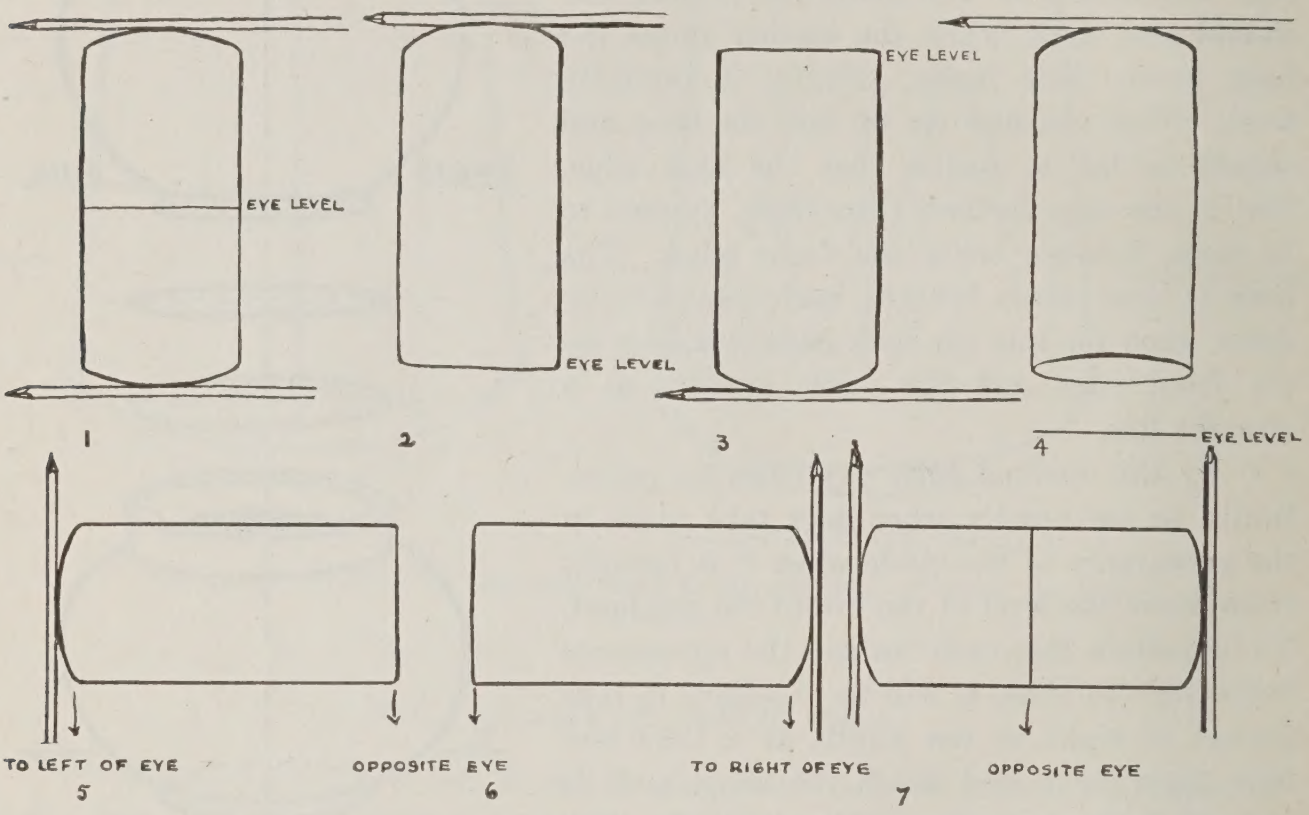


THE FORESHORTENED CIRCLE

The pupils should make diagrams to record what they have discovered regarding the appearance of the circle at the eye level, slightly above it, slightly below it, farther above it, and farther below it. They should also practise drawing free-hand ellipses of different proportions on paper and on the black-board, making a definite effort each time to improve the ellipse wherever the preceding one was defective. A very short practice of this kind may be taken with advantage at the beginning of any lesson in which objects involving the foreshortened circle are to be drawn. In drawing the ellipse, care should be taken to avoid pointed ends. The line for the horizontal ellipse should be begun at the lower end of the short diameter or axis, and a continuous movement made toward the left and around

the ellipse, thus ensuring a curve at each end of the long diameter. In vertical ellipses the line should begin with a downward movement at the right end of the short diameter.

THE CYLINDER



THE DRAWING OF THE CYLINDER

The drawing of the cylinder should follow a study of the foreshortening of the circle. Each member of the class should roll a sheet of drawing paper to form a cylinder six inches tall, which may be fastened with a rubber band slipped around the centre, or may be merely held in position. The pupil, holding this cylinder in a vertical position, may move it slowly up or down while he watches the changes that take place in the appearance of the circular top and bottom according to their position in relation to the eye level. In order to test the apparent direction taken by the curve, he may hold the pencil level and parallel with the face, allowing it to barely touch the nearest edge of the top or bottom, to see whether these edges appear to curve down or up, or remain level, according to the position of the cylinder in relation to the eye. He will discover that the farther the edge is above

the eye, the greater is its downward curve, and the farther below the eye it is, the greater is its upward curve. He may also fix in his mind the fact that the farther below or above the eye the circular end of an object is, the less it is foreshortened, that is the more nearly it approaches the circle in appearance. The same tests may be applied to the cylinder held horizontally.

Rapid drawings should be made by the class to represent the appearance of the cylinder in different positions. One lesson of this kind should be sufficient and should be considered preliminary to the careful drawing of more interesting objects.

A GLASS OR TUMBLER IN PENCIL OUTLINE

METHOD

After the glasses are placed satisfactorily, the teacher may ask each pupil to look at the glass he is to draw and compare its appearance with that of the cylinder which he has previously studied. He should be able to tell in what ways the glass resembles the cylinder and in what ways it is different. It will be noticed that the top is wider than the base and that the sides, therefore, have a slight flare.

A faint vertical line may now be drawn on the paper for the placing and height of the glass. Light horizontal lines may next be drawn across the top and bottom of this line for the width of the top and base. The pupil should then hold the paper from him in such a position as to be able to compare the proportions he has indicated with the glass itself. Pencil measurements may now be taken to verify his judgment. After any necessary corrections have been made, he may proceed to indicate the short diameters of the ellipses for the top and bottom of the glass, verifying with pencil measurements as before, or using the pencil as a straight edge to determine the amount of curvature. Light lines for the sides should next be drawn, and the drawing again compared with the object.

Before strengthening any of the lines in the drawings, the pupils should be led to notice that the line of the side appears to join the rim of the top of the glass in such a way as to form a slight curve rather than a sharp angle, and also appears to go round into the base in a similar manner.

Each pupil should now go over his drawing, gradually strengthening near edges and feeling for the quality of line that will best express the smooth texture and transparent brilliancy of the glass.

When the drawing of the glass is completed, a light table line should be added.

A study of good illustrations is of great help to the pupil in expressing texture. The bowl rendered in coloured crayons is an object somewhat similar in shape to the glass. (See also pencil group, page 211.)

PICTURE STUDY

THE FIGHTING TÉMÉRAIRE—TURNER

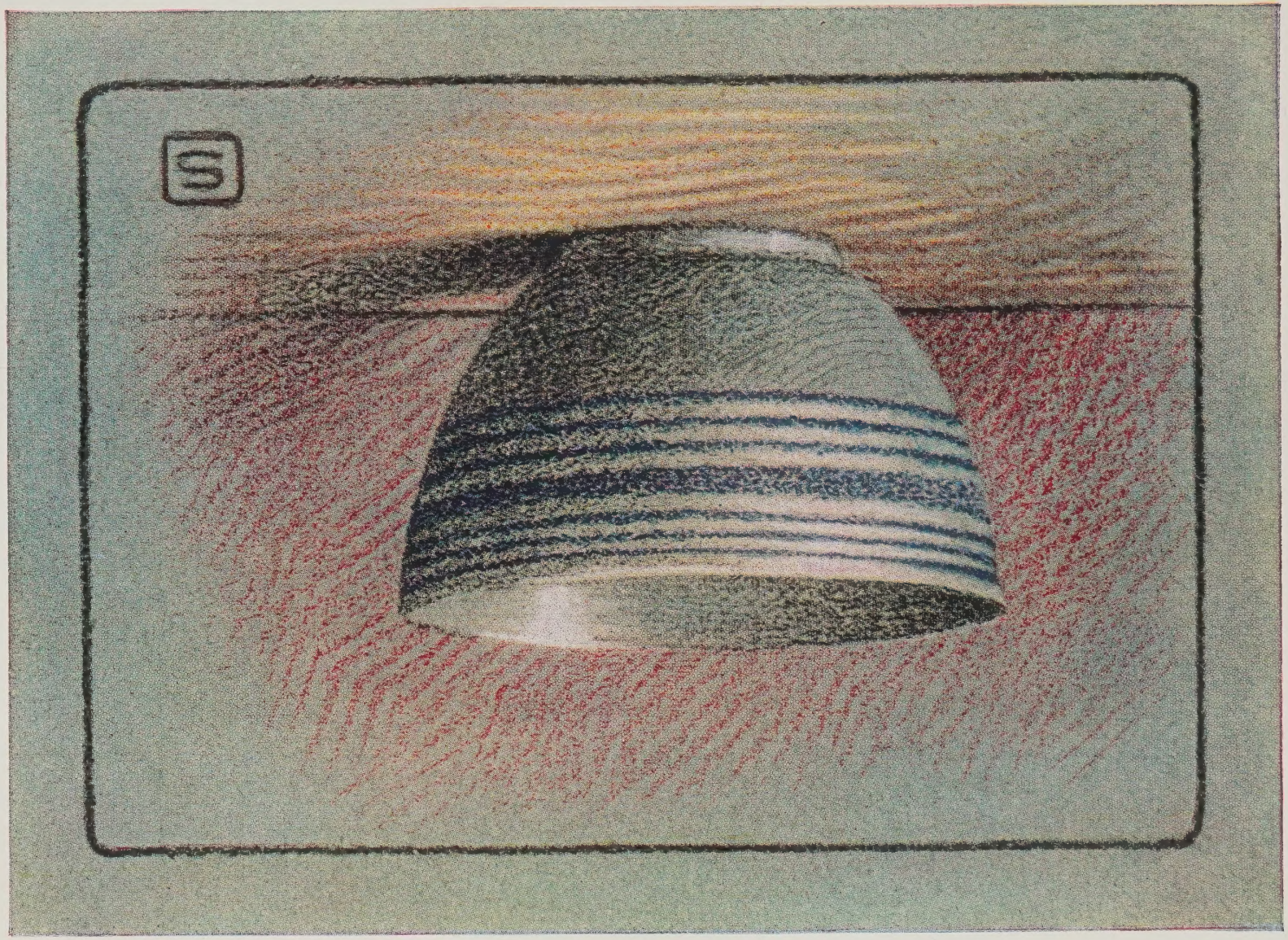
In studying *The Fighting Téméraire* with a class in Form III the pupils should be urged to find out before the lesson all they can about Turner and this picture of his, which has for its subject a theme that can be made most interesting to children of their age. Probably in the homes of the majority of the pupils are newspapers, magazines, encyclopædias, and other books from which information may be obtained. The habit of using a public library for purposes of this kind should also be cultivated. If a school scrap-book, the keeping of which is suggested in the General Introduction, is a feature of the school, newspaper and magazine clippings concerning artists and their best pictures should be kept in it, to be consulted when picture lessons are in preparation. Out of the mass of information collected, a simple, connected story of the artist's life and efforts should be arranged.

A coloured reproduction of this picture is preferable for study, but even a black and white print of it gives the impression of gorgeous colour.

In Forms III and IV, after each lesson of this character, a written exercise giving a short account of the artist's life, together with a description of the picture recording the pupil's own impressions concerning it, should be required of each member of the class.

THE ARTIST

Joseph Mallord William Turner, thought by many to be the greatest landscape painter that the world has ever known, was born in London, England, of middle-class parents, in the year 1775. In many ways his life and surroundings were not particularly happy nor in any way conducive to the fostering of genius. His talent seems to have shown itself very early. When he was five years old, he went one day with his father, who was a barber, to the house of one of his wealthy customers. While his father was occupied with the shaving and hair dressing, the small boy's eyes went wandering around the room, until they rested on a silver salver engraved with the gentleman's coat of arms. Immediately his attention became fixed on the figure of a rampant lion, which seems to have fascinated him for, on his return home, he disappeared for so long a time that the family became anxious and, when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he was at last discovered, he had made from memory a drawing of the lion that was sufficiently good to induce the father there and then to determine to make a painter of him.

As a child he was always sketching, but he would probably have received very little schooling if he had not become so ill that he had to be sent away from the crowded locality in which he lived to the home of an aunt in Brentford, where he was sent to school.

In Brentford, the Thames passes through sunny meadows, and at that time its banks were fairly free from buildings. Through the Thames valley the boy wandered much of his time, making sketch after sketch. Indeed all through his life he loved to wander, carrying only a small bundle and his sketching materials. In this way he travelled at different times through England, Wales, France, Italy, and Switzerland, collecting, in the sketches made on these trips, notes to be made use of in future pictures.

He began study in the office of an architect, who, recognizing the boy's ability, urged his father to make an artist of him. He entered the classes of the Royal Academy when he was fourteen and, at the age of fifteen sent a view of Lambeth Palace in water-colours as his first contribution to the Royal Academy Exhibition. When he was twenty-seven he was made a member of the Royal Academy.

From the celebrated French landscape painter, Claude Lorrain, whom he always admired, he learned much. His famous *Liber Studiorum* was suggested by a similar work of Claude's, which, however, unlike the *Liber Studiorum,* was a collection of rough sketches of completed pictures and was made for purposes of identification; whereas Turner's work was composed of finished drawings of phases of nature, which were arranged according to a definite plan.

From the very first there can be traced in his pictures the desire to paint atmosphere and sunlight, and it is in his wonderful atmospheric effects and the gorgeous hues of his skies that he excels all other painters. At first he seemed possessed with the desire to rival and outvie his predecessors and, in this spirit, it has been thought, he bequeathed to the National Gallery two of his own pictures painted in Claude Lorrain's classic style, on condition that they should be hung on either side of Claude's master-piece.

He had a habit of leaving the finishing of his pictures, after they had been sent to the gallery, to the last minute before opening day; then he would touch them up so as to leave them more brilliant than any of the pictures hung near them. He could be generous, too, when he chose, for on one occasion he put a

wash of lampblack over one of his most vivid pictures, because by contrast it took all the colour out of two of Lawrence's pictures which were hung near it. The lampblack, being a water-colour, was easily washed off afterwards. Another artist unconsciously paid a high tribute to Turner's power to paint sunlight and atmosphere, when he complained because his picture had been hung beside one of Turner's, saying that it might as well have been placed by an open window.

When Turner freed himself from the desire to outvie others, he came into his best style, that in which *The Fighting Téméraire* was painted. It was always the splendour and the enchantment of nature rather than her truths that he desired to portray, and in the power to suggest the mysteries of nature he has never been equalled. At the last, his desire to paint pure sunlight developed into such a passion that his pictures became mere experiments, snatches of glorious colour, but so vague and formless that even Ruskin, his great champion, had them set aside as unfinished pictures.

Turner, the man, is less attractive than Turner, the artist. He seems to have been a strange mixture of good and bad, of meanness and generosity. Throughout his life he was lonely and misunderstood. At the last he became gloomy, morose, and secretive. We cannot tell how happy his life might have been if better home influences had been granted him. He died in 1851, leaving his pictures to the nation and a bequest to poor artists which established a fund yielding a number of small annuities. His will was not carried out in the spirit of his wishes, and Ruskin makes the statement that "The Nation buried, with threefold honour, Turner's body in St. Paul's, his pictures at Charing Cross, and his purposes in Chancery".

THE PICTURE

The Fighting Téméraire, which Ruskin considers the last picture painted by Turner with his entire and perfect power, hangs now in the National Gallery, London.

This painting represents the disabled man-of-war being towed to her last berth. The picture has been criticised from the standpoint of truth. It is claimed that the lighting is absolutely impossible and that the artist makes both sun and moon cast their reflections wherever he chooses, regardless of nature's laws; but, in spite of these technical faults, the picture is "a perfect symphony of colour and the grandest sunset effect ever painted". Turner himself prized it the most highly of all his pictures and could never be persuaded to sell it. The full title he gave it

read *The Fighting Téméraire, tugged to her last berth to be broken up, 1838,* and added to the title were the lines:

> The flag which braved the battle and the breeze
> No longer owns her.

The scene is full of a sentiment which appeals to the heart of every Briton. From Turner's early boyhood he had loved the sea and mingled with sailors haunting that mysterious forest of masts in the Thames. As Robert Chignall puts it, in his life of Turner: "His earliest memories were of sea-fights. The battles of the Nile and Trafalgar stirred the enthusiasm of his early manhood. What stories of storm and battle he would have heard from old naval heroes! And now, at the age of sixty-four, he paints the elegy of one of those old ships of the line, familiar to his eye from boyhood".

He was actually a witness of the scene which he has painted in this picture. A number of artists were going down the river when the old vessel went by on her way to Deptford. "That's a fine subject, Turner", exclaimed a member of the party, but Turner was too deeply moved by the pathos of the passing vision to think of it as a fine subject.

Every graceful line of the old war vessel reveals her French origin. She was taken by Nelson in the Battle of the Nile. What battles she fought under the French flag before she fell into his hands we do not know. "Téméraire" means 'the one who dares', and she earned her title of *The "Fighting" Téméraire* in the battle of Trafalgar, when she kept close to her leader in the thickest of the fight and, by the splendid aid which she gave Nelson, endeared her name to all English seamen.

Now her career is over, her usefulness gone and, without muffled drums or pageant of mourning, she moves to her last berth. As we look, we lose all thought of the artist and his art. We see the ghostly old ship towering above the low, commonplace, little tug, as in proud silence she goes to her doom. But the blood-red streams of sunset wave in her honour, and the night wind and the waves chant her dirge. Under that vast arch of sky, we are conscious of the littleness of humanity, and a feeling of desolation comes over us. The picture speaks of death and the futility of man's work. To quote from Ruskin: "Under the blazing veil of vaulted fire which lights the vessel on her last path, there is a blue, deep, desolate hollow of darkness, out of which you can hear the voice of the night wind and the dull boom of the disturbed sea; because the cold deadly shadows of the twilight

are gathering through every sunbeam, and moment by moment, as you look, you will fancy some new film and faintness of the night has risen over the vastness of the departing form".

By giving to this sunset the red with which he associates the close of human life, Turner seems to convey to us that to him the old vessel had a personality almost human. The whole surface of the stream glows with liquid colour, but our eyes are drawn to the two vessels that by contrast emphasize each other's character. The bustling, business-like, little tug seems to puff her dark smoke with vulgar ignorance into the face of her majestic superior. "The old order changeth, yielding place to new." The day of the ancient battle-ship is over. Did Turner also wish to suggest that the greater power and utility of modern invention may not wholly compensate for the loss of the grace and dignity which characterized the old?

CHAPTER XI

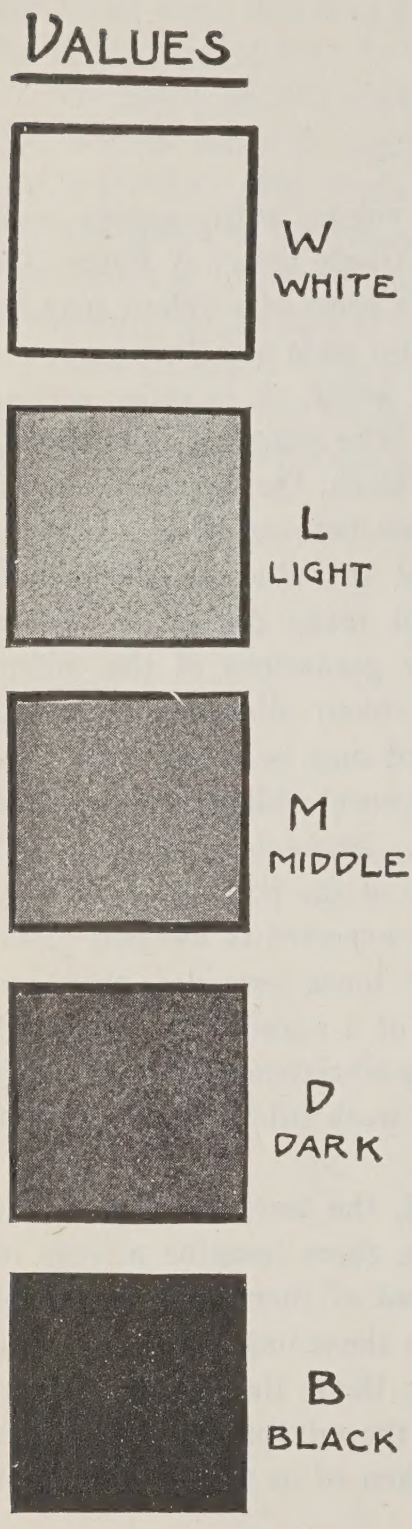
COLOUR

VALUES

THE METHOD of making the tints and shades of a colour with crayons and charcoal has already been given in the Form II, Junior Grade text. A Form III, Junior Grade class should learn that these light and dark tones of a colour may be arranged with the standard in regular steps so as to form a scale of values.

The value of a colour is its distance from black or white, or in other words, the position it occupies in relation to black and white. The nearer it is to white, the lighter or higher it is in value, the nearer it is to black, the darker or lower it is in value. Each standard colour has a definite place between these two and, when water-colours are used, the colour may be raised in value, that is, made lighter or nearer white by the addition of water, and made darker or nearer black by the addition of a little black. A great many gradations of the colour lighter than the standard may be made before all colour disappears leaving white, and a great many values darker than the standard may be made before the colour is lost in black. The tones of gray that lie between white and black are called *neutral values,* because there is no hue in them. Some text-books of Art choose nine values and give them certain names, because of the positions that they occupy in the scale. A Form III, Junior Grade class is expected to use only three balanced tones of gray, but these may be any three tones provided they are balanced. If the pupils can be given a mental picture of a scale of five balanced values including white and black and can grasp the appropriateness of the names which have been given them, they will be able to go to work intelligently at their own scales of any three balanced values.

As the Neutral Value scale is easily comprehended, the teacher can give the pupils an intelligent conception of this scale by having them imagine a heap of pure white powder at one end of a desk or table in front of them, and a heap of velvety black powder at the other end. He should have them imagine him taking equal measures of each of these powders and mixing them thoroughly. Upon being questioned, the class will tell him that the tone of the mixture will be neither white nor black but gray, and a gray which can be spoken of as neither light nor



dark, because it is exactly half-way between white and black; for this reason it has been called Middle. The next step is to have the class imagine a small quantity of this middle-gray mixed with an equal quantity of the white powder, and describe its tone in relation to middle. It is neither white nor middle-gray but a different tone of gray exactly half-way between the two, which is light when compared with Middle and therefore may be called Light, appropriately. In the same way the class may imagine a portion of the middle-gray powder being thoroughly mixed with an equal quantity of the black powder, and the resulting tone would be neither middle nor black but a gray for which Dark is a suitable name, because it is dark in comparison with middle.

A vertical ladder with five rungs might be drawn on the black-board and "White" written on the top rung and "Black" on the bottom rung. Each of the other three tones should be written in place, as the name which describes it is learned.

After this development of the subject, each member of the class should make a vertical row of three small squares. The square at the top should be left in outline, so that the paper may represent white. The bottom square should be covered with a tone as black as charcoal will make it, while the square between should be covered with a tone of charcoal to represent middle. Each pupil should be urged to consider this tone carefully, to get one which is exactly balanced with white and black, that is, one which is neither light nor dark but exactly half-way between white and black.

Two or three exercises in balanced values should be worked out in charcoal, before the class is required to make balanced tones with water-colours.

THE GRAYING OF COLOURS

In Forms I and II, pupils are allowed to use bright colours in their designs, but they are safeguarded from producing violent discords by being limited to one colour in each piece of work and required to use gray, white, or black with it. In Form III, Junior Grade, they should be taught to realize the necessity for subordinating the colours used in designs intended for house furnishings and articles of wearing apparel, in order to produce greater harmony.

Bright colours stimulate but, when the eye is kept constantly stimulated, it soon becomes wearied, sometimes even unbearably irritated. Softer colours and combinations of colour give a sensation of restfulness. When colours are made softer or duller in any way, we speak of them as Grayed Colours.

Colours may be grayed by the addition of a very little black, but the resulting colour is not as pleasing to the eye as when the colour is grayed by the addition of a little of its complementary.

COMPLEMENTARY COLOURS

We can make with red, yellow, and blue, all the colours that we require; we may therefore think of the three as forming something which is complete. If we take one of these three colours, the two others united will form its complement. Thus the complement of red is green, which is produced by the union of yellow and blue. In the same way red and blue unite to form violet, which is the complement of yellow, and red and yellow unite to form orange, which is complementary to blue. The pairs of complementaries produced in this way may be arranged as follows:

Red is complementary to green (yellow + blue).
Green (yellow + blue) is complementary to red.
Yellow is complementary to violet (red + blue).
Violet (red + blue) is complementary to yellow.
Blue is complementary to orange (red + yellow).
Orange (red + yellow) is complementary to blue.

To gray orange so as to make it a little less bright, we require to add to it a very little blue. The more blue we add to the orange the duller it becomes, until finally it is gray, and if still more is added, it begins to have a blue tinge. The

duller therefore we wish to make a colour, the more of its complementary colour we must add to it; but we must be careful not to add sufficient of the complementary colour to destroy the required colour.

We learn from this that gray may be produced by the union of any pair of complementaries or, by what is practically the same thing, the union of the three primary colours—red, yellow, and blue.

THE MAKING OF BROWN

The pupils will probably discover for themselves that orange may be grayed so as to make brown; and as the making of brown is necessary in painting many specimens from nature, they should be taught that a touch of blue added to strong orange will produce brown and should also be required to make tests to discover in what way the browns produced from yellow-orange, orange, and red-orange differ.

THE BALANCING OF THREE VALUES

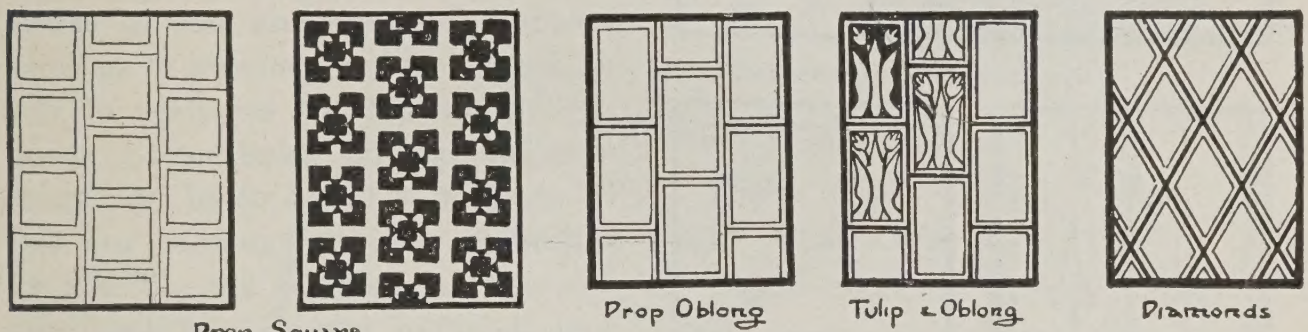
In working out this exercise the pupil should make a small quantity of any strong, dark tone with his water-colours. It may be a dark gray or a grayed colour. He places this dark tone in the bottom rectangle of a row of three rectangles, each about an inch square, which he has drawn on a sheet of drawing paper. He then dilutes some of the same tone with water, so as to produce a much lighter tone, which is placed in the top rectangle. His problem now is to make a tone which shall be exactly between these two in value. He should not be allowed to guess at the tone, but should be urged to make a definite effort to dilute a little of the first tone with what he considers just enough of the second tone, or of water, to produce it. He should make one brush stroke on a trial sheet of paper, to test the value of this tone. He should then compare it with the two tones already made, to decide whether it is too light or too dark. After doing what is necessary to make it correct in value, he should place it in the middle rectangle.

DESIGN

MEASUREMENTS

In many respects the work in Design in Form III, Junior Grade, should differ but slightly from that in Form II, Senior Grade. Form III pupils may use inch or half-inch measurements in making their constructive plans for the repetition

of units, or smaller measurements if the problem upon which they are working seems to demand them. As soon as pupils become familiar with the markings on the ruler and can measure accurately, their constructive measurements should be made with a view to proportion, so as to bring about a good balancing of spaces. When the measurements are to be left to the individual pupil, the lesson should begin with a class discussion as to whether large divisions of space or small ones are desirable in the problem under consideration.



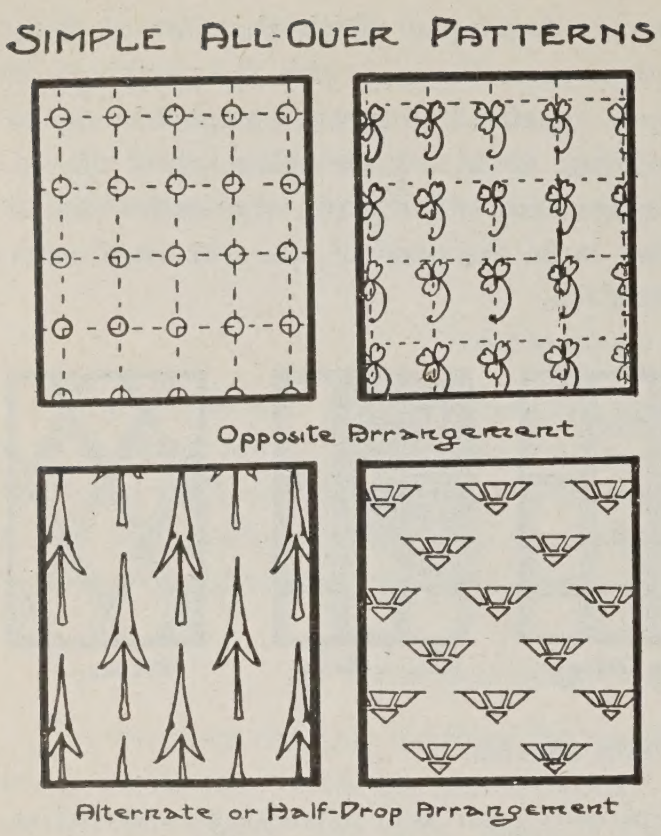
CONSTRUCTIVE PLANS

Squares, oblongs, and diamonds have already been used in making constructive plans for surface patterns. Form III pupils may use the same constructive plans, but they should learn also to bring about a different relation of the units in their surface patterns, by using a constructive plan in which the squares or oblongs in every other vertical row drop half a space below those on either side of them. (See illustrations.) This type of constructive plan requires a careful consideration of the size of the unit in relation to the space to be occupied by it.

UNITS OF DESIGN

The units of design used in this class, for the most part should be either geometric or forms derived from nature similar to those already described in the text for Form II, Junior and Senior Grades. Greater refinement in the shape and greater accuracy in the repetition of the unit should be expected from Form III pupils. In this class, except in special cases which may demand a different treatment, the unit should be designed first, and the constructive plan that will best fit it then chosen.

In Form II, Senior Grade, it was found that geometric units of a certain character could be repeated in every square with good results, because of the back-



ground shapes that were formed. Units of a different character lost much of their beauty unless they were repeated in alternate squares, a method of repetition which permits each unit to be seen more or less separately. In the constructive plans of diamonds, drop squares, and drop oblongs, good background shapes are not so easily produced. Unless a margin of space is allowed between the boundary of the unit and the line bounding the space in which it is to be placed, the units will merge into one another and the separate units will be lost. The next step, therefore, when one of these constructive plans has been chosen, is to draw a light marginal line inside of each diamond, square, or oblong, as the case may be, thus forming an inner shape which will determine the size that the unit is to be drawn. The pupil must bear in mind, when he is drawing this marginal line that, after the constructive lines are erased, the space between the units will be twice the width of the margin allowed around each unit in the constructive plan.

The constructive plan may be made with ruled lines, but the inner marginal line should be made freehand and very faint.

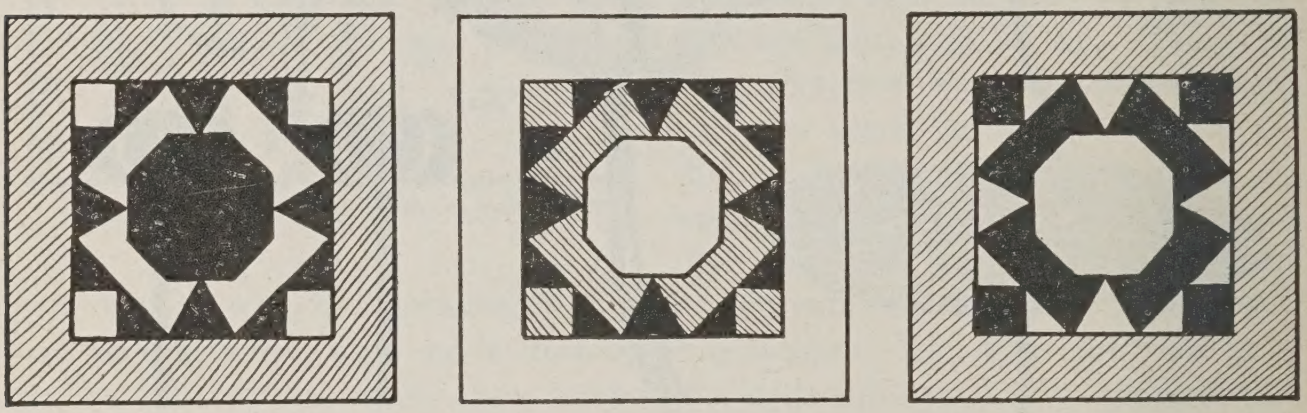
Good results may be obtained when the above constructive plans are employed either with units derived from flower forms or with units that are geometric in character, provided that care is taken to keep the margins in all the spaces uniform and in good proportion to the size of the unit.

Arrangements (*a*) and (*b*), given in Form II, Senior Grade text, to develop the judgment of the pupil with regard to a proper balance between pattern and background, could be adapted to surface patterns repeated in the above ways and used in this class for the same purpose. (See page 139.)

YELLOW POND LILY

TILE PATTERNS

The teacher who follows the subject of Design through all the Forms cannot fail to notice the increasing attention that is paid to the unit in itself and in its relation to the background. The tile pattern affords an opportunity to concentrate the attention of the class on the unit itself and leads up to the fuller consideration of single units given in Form III, Senior Grade. The tile pattern would make an ideal problem, if it could be worked out in clay and the best tiles glazed and fired to take their place in actual service as tea-pot stands. The making of single units of this type need not be discarded, however, if under present conditions the use of clay in this way is impossible, as there are many useful articles for which a pattern of this kind is eminently suitable. Two of these are given among the problems in Applied Design for this Grade.

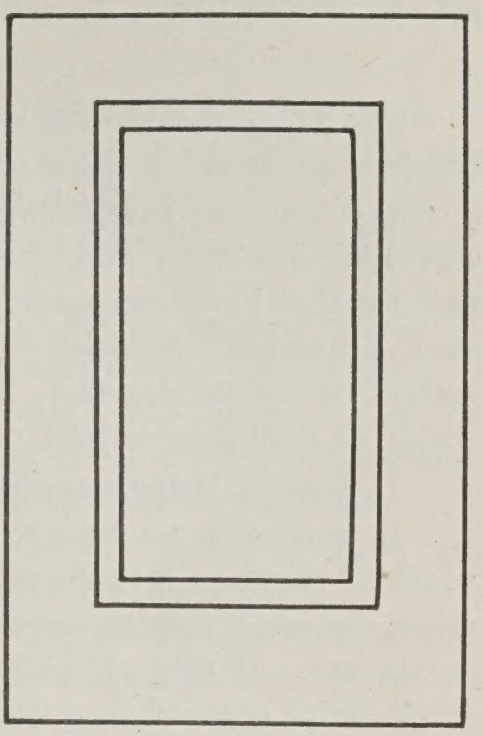


It is expedient to confine the attention to the square tile and to use a geometric pattern having the four sides alike. The pupils very probably have made, in the previous Forms, geometric units that would be suitable for the purpose. The diameters and diagonals should be drawn lightly and used as constructive lines upon which to build the design. There should be an arrangement of shapes that will permit three different tones to be used, without allowing two shapes of the same tone to come together in such a way that one is merged into another and loses its identity.

Squared paper is a great convenience in planning the tile pattern, which should be made at least three inches square. The simpler the pattern, the better it is likely to be, if care has been taken to bring about well-related spaces, so that the eye will not find it difficult to discern differences in size and will not feel these differences disproportionately great.

The first tile patterns made should be finished in gray, white, and black. The school ink or black water-colour may be used in finishing the patterns. Three different drawings of the pattern should be made, to show three different arrangements of the tones. All corresponding parts in the pattern in each square should be kept of the same tone. (See illustrations.) The pupil should choose the one which he considers most satisfactory. A class criticism of results, with reasons given for commendation or disapproval, is always beneficial.

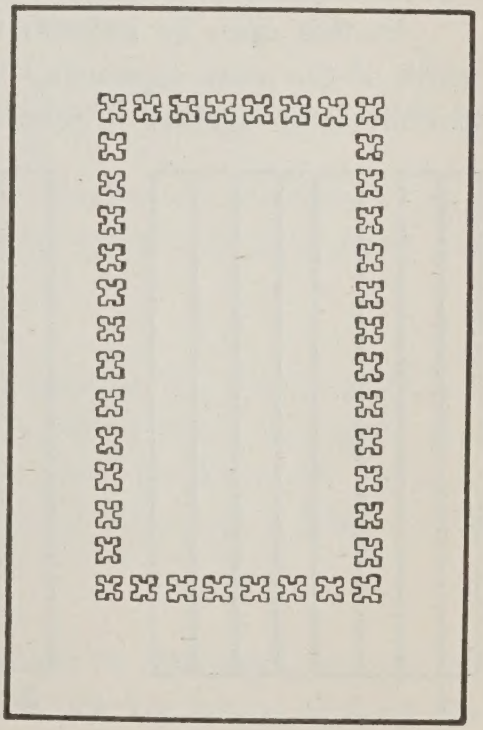
To have the class make as many variations as possible of a design drawn on the black-board by the teacher is a good exercise. The variations may be due to different proportions of the parts, the doubling of certain lines, the putting of certain shapes on top that have been hidden in part by other shapes, or any other modifications that do not alter the original plan.



MARGINS

These have already been dealt with in the preceding Form, and the pupils in this Form should have a good deal of practice in making margins in their work in Illustration and Representation.

As an exercise in Design, the marginal line may be doubled so as to form a strap-shaped space between the central panel and the margin. To be satisfactory, this space should be narrower than the margin and in good proportion to it and the central panel. This type of decoration may be used with propriety in designing book and programme covers. It is seen frequently also on sofa cushions, table covers, bath rugs, and other articles of the kind.



As a similar problem is to be found in the designing of mouldings, window and door casings, door panellings, and wall spaces, those seen in the school-room may be discussed from the standpoint of proportion.

STRIPES

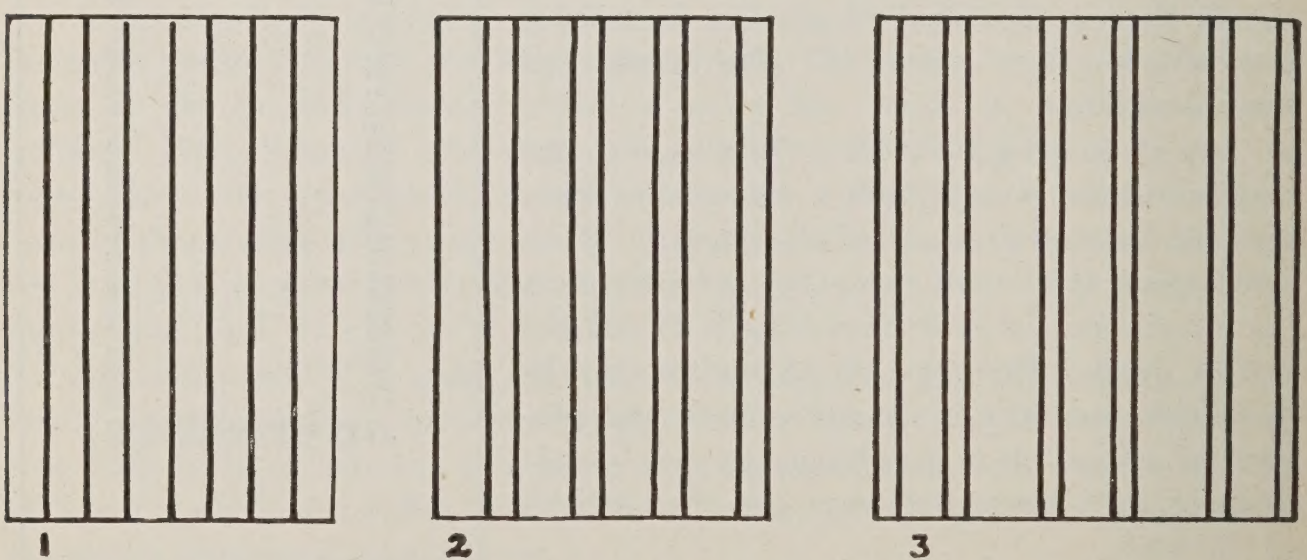
The pupils should have had some experience already in the making of stripes, which is a problem in space relations not unlike the designing of a moulding. In a striped fabric we have, however, the added interest of regular repetition. So far very little has been said about Rhythm although, in the borders and surface patterns that have been made, the regular repetition of the unit has produced one kind of Rhythm. We shall find this recurrence at regular intervals in a repeating pattern of stripes, together, in some cases, with a more subtle kind of Rhythm which we shall observe later. In a surface pattern of stripes we may have:

1. A single stripe repeated at regular intervals.

In making it we have to think of the width of the stripe in relation to the width of the space between the stripes. If the stripes are placed too close to each other, the result may be monotonous or may produce an unpleasant dazzling effect on the eye. If they are placed too far apart, a lack of balance is evident. The single stripe does not as a rule make attractive space divisions.

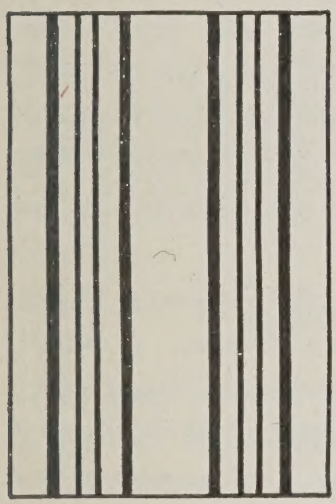
2. A group of two or more stripes of the same width.

In this case, we have to think of the width of the stripe in relation to the width of the space separating the stripes in the group, and also the width of these severally and together in relation to the space separating the groups.



3. A group of four or more stripes of the same width, having the spaces between the stripes of different widths.

In this case, we must think of the width of the stripe in relation to the space next in width, and that space in relation to the next in order of width, and the width of this last space and also the width of the whole group in relation to the width of the space separating the groups. In the relation of these spaces to each other, we may have a regular gradation of increasing widths that will give another and a subtler kind of Rhythm than that produced by the recurrence of the groups.



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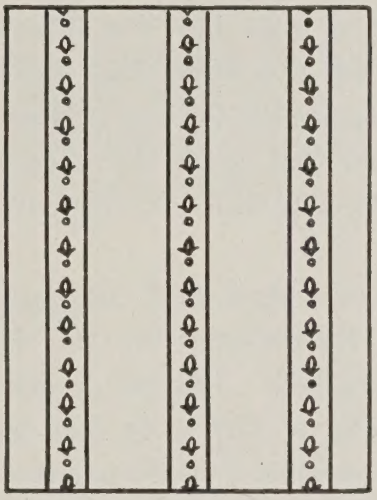

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4. A group of three or more stripes that differ in width, with equal spaces between the stripes in the group; or that differ in width, with unequal spaces between the stripes in the group.

It will be quite evident that this arrangement gives an opportunity for a rhythmic relation in the width of the stripes.

5. A group of stripes in which one (or possibly two of the stripes) is made up of some small unit of design repeated in a vertical row.

In making a design of stripes suitable for a dress muslin or a cambric shirting, the class should be limited to a choice of from two to four stripes in a group and urged to keep the group simple.

BORDERS

Under the head of margins, a strap border is suggested that might be broken up with good effect into very simple units, with spaces between the units just wide enough to permit each to be seen separately without breaking the apparent continuity of the border. Other arrangements of borders have been given in the preceding Forms.

WALL-PAPER PATTERNS

Some problems in Design are of material interest to the pupil though not suitable for school work, inasmuch as the pupil cannot see his design used for the

purpose for which it is intended and so cannot judge whether his efforts have been truly satisfactory or not. Whether means can or can not be found to obviate this difficulty, a class discussion of such problems may prove not only interesting but of practical value. Matters pertaining to house furnishings and clothing may come up for discussion in this way. The graying of colours, which is taken up in this Form, affords an opportunity for impressing the propriety of keeping all backgrounds soft in colour. The average pupil in Form III, Junior Grade, has had sufficient experience with wall-papers to enable him to discuss this subject intelligently. It will not be difficult to get him to realize that the wall-paper used on a dark room should be much lighter in tone than one intended for a very light room, where a colour should be chosen for the walls that will soften the glare of light. Two tones of a grayed colour, as suggested for use in Design in this class, is one of the most agreeable colour schemes that could be chosen for a wall-paper. The tones used should be rather close to each other in value, so that the pattern will not be too prominent.

In some schools a dolls' house is kept, and the pupils in the different Forms make the wall-papers and other furnishings for the different rooms. A small, empty packing-case will do equally well. Turned on its side with the front open, it exposes three walls and the ceiling to view. It may have a partition dividing it into two rooms, which may be furnished as a living-room and a dining-room one year, and as two quite different rooms another year. The designing of surface patterns and borders for wall-papers and the dividing of walls into well related spaces, become very practical problems under these conditions.

APPLIED DESIGN

Each lesson in Design should be planned with the intention of making it lead up to and prepare the pupil for the working out of some problem in Applied Design. A series of lessons should culminate in the application of the best designs to some article for which they are appropriate. It is just possible that conditions might exist that would make it expedient to have these articles constructed at home. Wherever it is at all practicable they should be made in class and, in any case, all the planning should be done there.

CALENDARS

Careful instructions have been given already for the making of calendars, in the Form II, Senior Grade text. A rectangle of the same width as the calendar pad

and in pleasing proportion to it with regard to height could be cut from the painting of a spray of flowers or fruit and used instead of a landscape. It should be outlined with some dark colour that appears in the picture. This class should take especial care to have, from top to bottom of the calendar, no two spaces alike. The space between the picture and the pad should be the smallest. The reason for this has already been given. There should be a pleasing gradation in size from the smallest to the largest space, although the spaces are not arranged in order according to size.

BOOKLET COVERS

The booklet cover is a problem in Applied Design suitable for any Form. The instructions already given should be sufficient if the making of a book cover has been decided on for this class.

A single square unit, like those used for the tile patterns, may be placed under the middle of the title, as the unit made from the two sevens is placed on the booklet cover in the Form II, Senior Grade illustrations. It may or may not look better without the bounding line of the square; that point must be settled by the individual designer. It should occupy a space much narrower than that occupied by the title, and should not be placed close enough to it to be confused with the lettering nor far enough away to form a separate point of interest. Properly placed, it will attract attention to the title and appear to lend it support, although there may be quite a space between it and the title.

OPTIONAL PROBLEMS IN APPLIED DESIGN

TABLE MATS

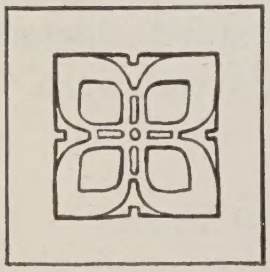
A square mat of any desired size may be cut from felt or thick cloth and used to protect the surface of a polished table. The material should be of a rather light tone of some grayed colour that will harmonize with the furnishings of the room for which it is intended. The colour chosen for the design also should be in harmony with the other colours used in the room.

The tile patterns that have been made by the class will make appropriate single units for the decoration of the table mats. In case the mats are to be quite large, four repetitions of the unit may be placed so as to form a square in the middle. Instead of being placed in the centre, the units may be made smaller in size and used in a border. Whichever form of decoration is decided upon, an outer margin in good proportion to the inner spaces should be left without decoration. The cut edges will require no finishing unless the cloth used is likely to fray, in which case the edges should be button-holed or finished with a rather close blanket-stitch.

The pattern should be traced on the cloth with carbon paper, after the paper on which it is drawn has been pinned securely in place on the cloth. After the pattern is traced on the cloth, the design may be painted with water-colours. The right quantity of colour for the purpose should be mixed in the lid of the box. It will need to be somewhat darker in tone than the cloth, rather thick, and quite strong, as the colour of the cloth will gray it sufficiently. Oil colours thinned with turpentine and worked into the cloth with a brush that has been saturated with colour and then pressed out so as to be nearly dry, will make the designs more durable.

PEN-WIPERS

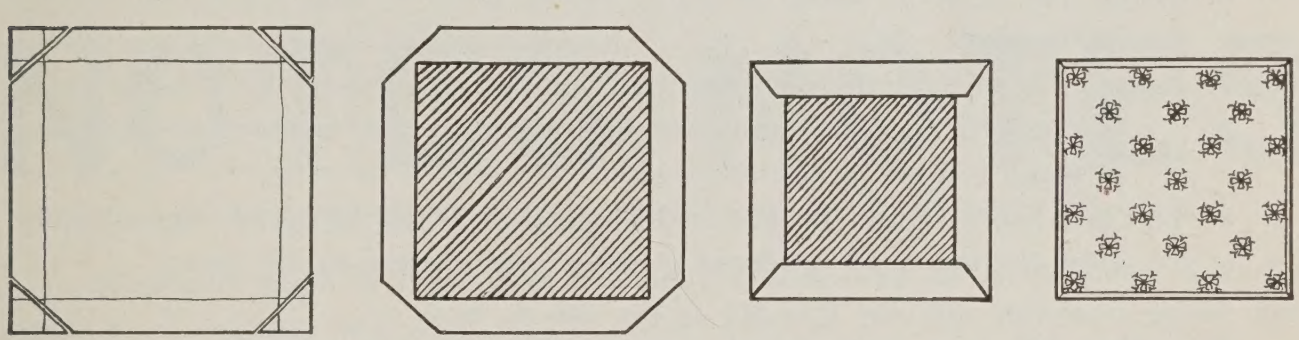
A three-to-four-inch square of felt or leather, rather light in tone so that colour will show on it, but of a grayed colour so that it will not soon become soiled, will make an attractive cover for a pen-wiper. The under leaves may be made of chamois or of some suitable cloth. A single unit like the tile patterns already described will be a suitable decoration. A still more attractive cover can be made with a square of mill-board or stiff cardboard which has been covered with gray linen or any smooth-finished



cotton or linen cloth of a satisfactory colour. The linen is cut about an inch or an inch and a half larger each way than the square of mill-board, so as to allow laps at least one-half inch wide all around. The laps are well creased, so that the place for the mill-board is clearly marked before it is pasted in position. When this is done, the corners of the laps are cut across one eighth of an inch beyond the corners of the mill-board. The laps are then pasted in position, and the under side of the cover is lined with a square cut from a surface pattern made some time previously. The unit is then traced and painted in the middle of the top of the cover. The leaves of chamois or cloth are cut to fit, and all the parts are fastened together with a round, brass paper fastener which may have the top covered with the linen and coloured to match the design. The surface pattern on the lining paper should harmonize with the design on the cover.

The illustration on page 186 shows that the design may be so planned that the paper fastener forms part of it.

MATERIALS



For a $3\frac{1}{2}''$ pen-wiper the following things should be in readiness before the period in which it is to be made:

A $3\frac{1}{2}''$ square of mill-board
A $4\frac{1}{2}''$ square of cover cloth
A $3''$ square of paper covered with a suitable surface pattern, for the lining
A $3\frac{1}{2}''$ square of carbon paper for tracing
A single geometric unit of the same type as the tile patterns, from $2''$ to $2\frac{1}{2}''$ square
A paper fastener
Two or more $3''$ squares of chamois or cloth for the leaves of the pen-wiper
A pair of scissors

About a teaspoonful of paste

There should also be two thicknesses of newspaper on the desk to protect it, and a damp and also a dry cloth for wiping paste from the fingers.

METHOD

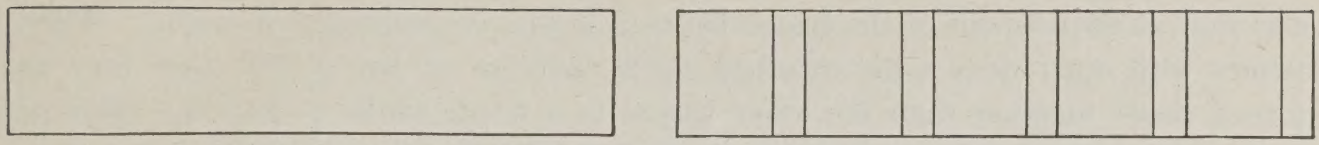
1. Crease the square of cloth to fit the mill-board and cut the corners as directed above.
2. Put a smooth layer of paste on one side of the mill-board and press it into position with the paste side next the cloth.
3. Put paste on opposite laps in turn and smooth them well up on the mill-board on the wrong side of the cover, tucking the corners in securely.
4. Put a smooth layer of paste on the wrong side of the lining paper and paste it in position on the under side of the cover so as to hide the laps.
5. Trace the pattern on top of the cover, leaving the margins even all around.
6. Colour the pattern, using the paint rather thick so that it will not spread in the cloth.
7. Fasten the cover and leaves together by putting scissors or a knife point through their centres and then pushing the paper fastener through and pressing it down firmly in place.
8. The pen-wiper should be put under pressure either before or immediately after the leaves are fastened in place, and allowed to dry there.

Mounting paper, or even drawing paper that has had a wash of a grayed colour applied to it may be used instead of the cloth for covering the mill-board square for the pen-wiper.

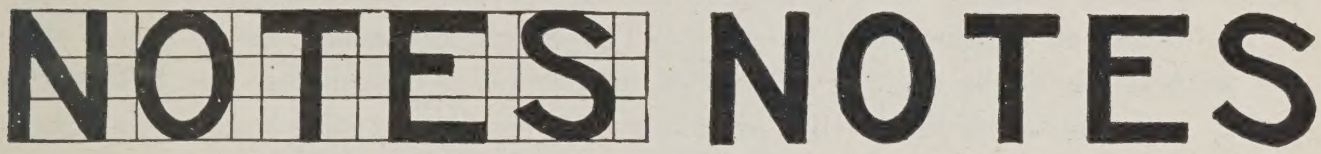
LETTERING

Up to the present time the pupil's attention has been directed mainly to keeping letters vertical, of the same height, in an even line, and grouped so that the words are separated by a definite space and can be read at a glance.

Although nothing has been said about the cross lines or bars that come somewhere between the top and bottom of many letters as, for example, A, E, R, F, they must be placed in an orderly way. This may be easily managed if the space which is to be occupied by the letters is divided into thirds horizontally.

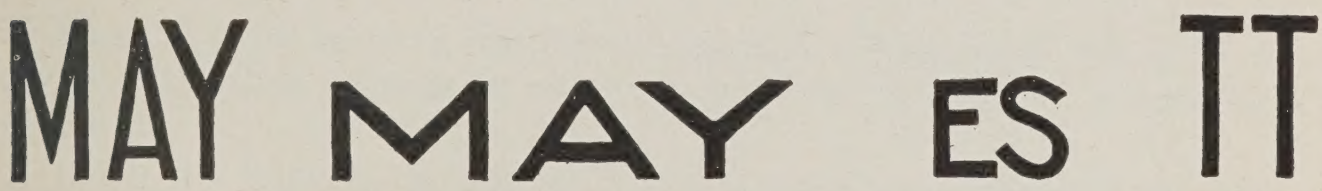


When a single word is to occupy a given space, this space must be divided into as many vertical divisions as there are letters in the word. The last quarter of the width of each division should be allowed for the space between letters. The last letter should come to the end of the given space. If a rough estimate of the width that may be allowed for the letters be made, a space equal to the narrow division that is to come between letters may be added to the end of the space that is to be occupied by the whole lettering, before the divisions are marked off. This added space is rubbed out with the other construction lines when the lettering is complete, leaving the last letter even with the end of the original space. If there is more than one word in a line, the width of a letter should be allowed for the space between words.



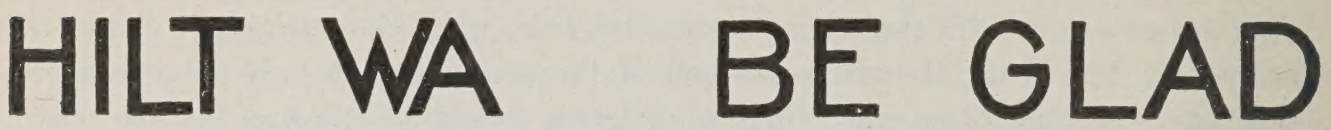
LETTERING BEFORE AND AFTER CONSTRUCTION LINES HAVE BEEN ERASED

Allowance must be made also for letters that are not of the same width as the others. I requires only half of the width allowed for the standard letter, and M and W are likely to look compressed unless they are made a quarter of a space wider than the other letters.



Lettering may be made of any proportions that will best fit a space. Although the height is made a little greater than the width usually, the space to be occupied may necessitate the making of one dimension much greater than the other and, provided uniformity is maintained and the space agreeably filled, the letters may be made comparatively tall and compressed, or low and extended. It will be found

also that an adjustment of the spaces between letters is frequently desirable. When letters with open sides come together, as in the case of ES or TT, they may be placed closer together than the other letters in a word, while, to give the effect of even spacing, those with closed vertical sides, as HIM, must be placed farther apart. Such combinations as WA and LT permit the slipping of the projecting part of one letter into the space belonging to the other. It is easier to get good spacing in some words by first experimenting on a piece of practice paper to get the best relation of each letter to its neighbours and to the whole space, and then drawing this arrangement of the letters with light pencil lines in the required space without any preliminary dividing of it with the aid of the ruler.



The lettering, to be in harmony on some pieces of work, must be light and delicate, while a heavy, dark-looking letter may be more in keeping with the rest of the design on another piece of work. The weight of stroke that will best suit the purpose should be decided and tested on practice paper, before the letters are put in with the brush line of ink or colour over the light pencil lines. All pencil construction lines must be so faint that they will not show through even a rather light-coloured wash, as any erasing of lines may roughen the paper and cause the edges of the letters to blur when the colour is applied. When the lettering is quite dry, all the construction lines that appear between the letters should be erased.

CHAPTER XII

FORM III, SENIOR GRADE

ILLUSTRATIVE DRAWING

THE TEACHER of Form III, Senior Grade, should read the instructions on Illustrative Drawing given in Form III, Junior Grade and, if he finds that the majority of his pupils illustrate games and sports well, he may test their ability to place flowers in a landscape.

The following quotations give ample opportunity for correlating lessons on flower painting with Illustrative Drawing:

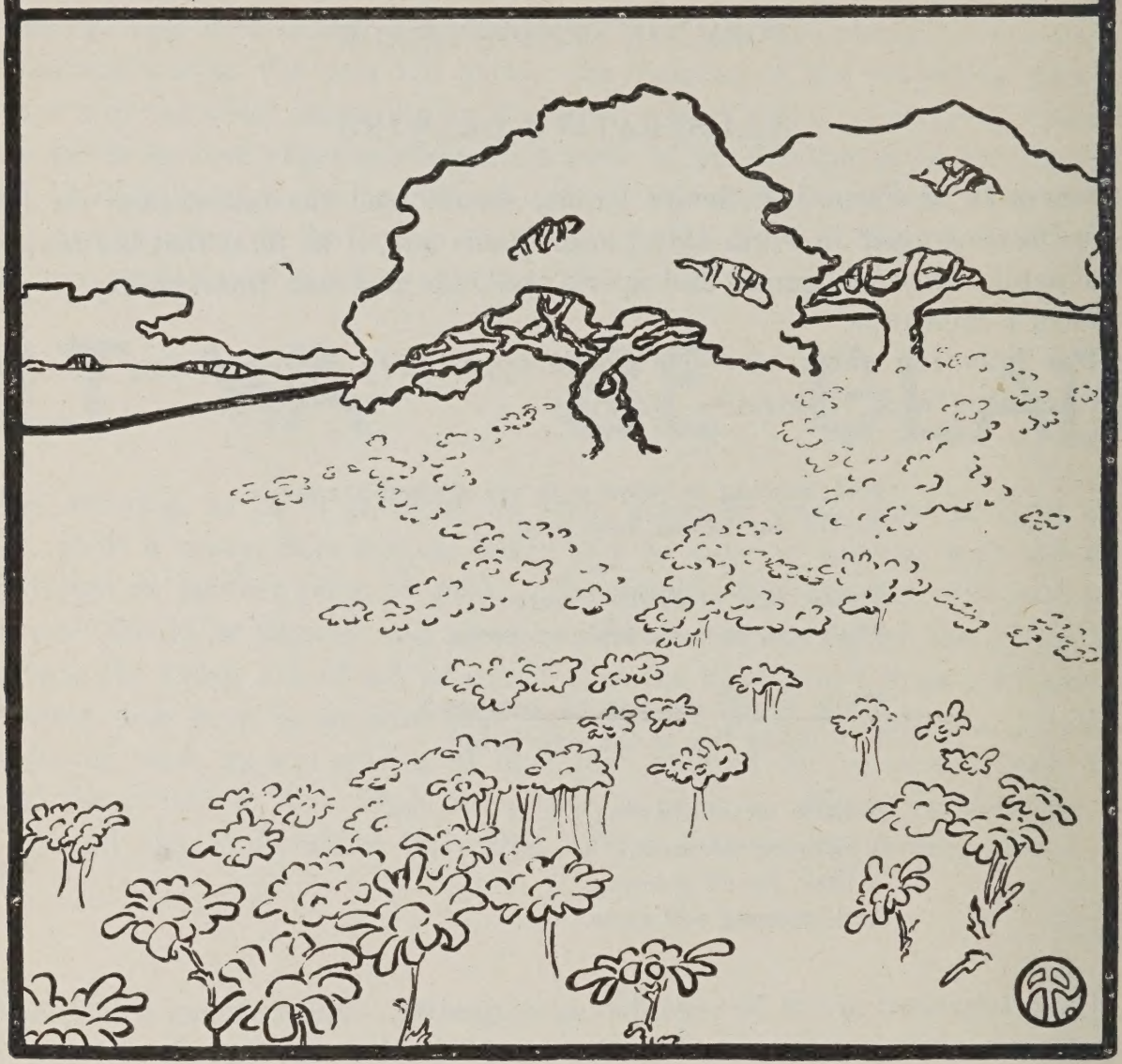
> And seeming to move with my shadow's trace,
> Joyful dandelions keep pace.
>
> Tulips, like to Sheba's queen,
> Strut and pose on fields of green.
>
> While stately marches of Iris tread,
> In winding line to the river's bed.
>
> A little bit of blowing,
> A little bit of snow,
> A little bit of growing,
> And crocuses will show.

These selections are to be regarded as suggestive. Many classes will prefer to select for themselves passages of poetry or prose that are equally suitable for illustration.

Illustrative Drawing, in addition to giving pupils an opportunity for self-expression, reveals to their teacher where they are weak in drawing and need further drill and instruction.

The accompanying drawings give an idea of one method of arrangement for illustrations of this kind.

JUNE



A DRIFT OF SNOWY BLOOMS
ACROSS THE MEADOW FLUNG,
WHERE BOBOLINKS' CLEAR NOTES
IMPATIENTLY ARE RUNG

JUNE

A DRIFT OF SNOWY BLOOMS
ACROSS THE MEADOW FLUNG,
WHERE BOBOLINKS' CLEAR NOTES
IMPATIENTLY ARE RUNG

"Even the very imperfect representation of a situation will seem to make it clearer to the one endeavouring to picture it."

METHOD

After the teacher has shown on the black-board margins that are appropriate to the space to be decorated, each pupil should draw on the sheet of drawing paper a rectangular inclosure that will leave a suitable margin. This inclosure should then be divided into two rectangles of the same width but of unequal height. A space narrower than the width of the margin should separate the two rectangles. The upper rectangle is intended to inclose the drawing; the lower rectangle gives the space to be occupied by the words that the drawing illustrates. No drawing should be made until these rectangles and the margins subdivide the area of the paper so as to bring about agreeable space relations. The lines to be illustrated may be long enough to require the larger rectangle or sufficiently short to require a much smaller rectangle than the drawing but, in any case, the one space should not seem altogether to overbalance the other.

The upper rectangle should now be planned to show a simple landscape in pencil outline. The flowers should next be drawn in outline, quite large in the foreground and growing smaller as they recede into the picture, until they finally disappear. Care should be taken to foreshorten the flowers as they recede.

When the upper rectangle is finished in pencil outline, the lettering may be planned to fit the lower rectangle. If frequent erasures have been necessary, the landscape and letters should be redrawn or traced upon a fresh sheet of drawing paper.

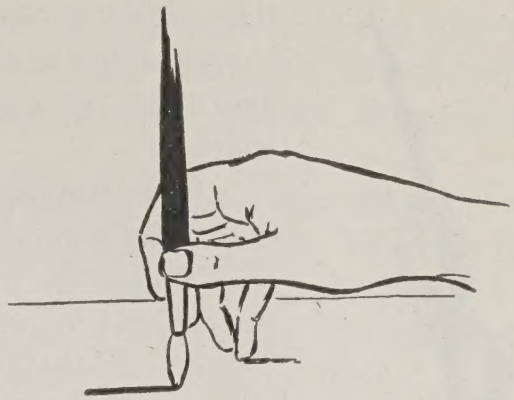
When the whole sheet is ready in pencil outline, the colour should be put on in flat washes, care being taken that each space is dry before a wash is applied to a space that touches it.

When the paper is quite dry, the outlines should be gone over with India ink, black water-colour, pencil, or any very dark colour that harmonizes with the colours used.

It will be found that the simpler the drawings are kept, the greater will be the success obtained. Many beautiful examples of this type of illustration are to be found in magazines.

DRILL IN DRAWING BRUSH LINES

To make brush lines such as were required in the above lesson on Illustrative Drawing, a class should have frequent practice in freearm line drawing. For this purpose, the brush should be held between the thumb and forefinger, with the middle finger resting against the side of the handle lower down than the fore-



POSITION OF HAND FOR DRAWING BRUSH LINES

finger, so as to keep the brush steady in an absolutely vertical position; the little finger may rest lightly on the paper, but the wrist and arm should be quite free from the desk. For a light line the point of the brush barely comes in contact with the paper, and the width of the line is governed by the way in which the point of the brush just touches the paper or is pushed down against it. The hand is moved slowly and steadily across the paper from left to right, or from top to bottom, or in whatever direction the lines are to be drawn. The hand should be kept perfectly steady, all movement being from the shoulder. The control of the medium gained by these drills is very noticeable.

WILLOW CATKINS, OR " PUSSY WILLOWS ", IN WATER-COLOURS

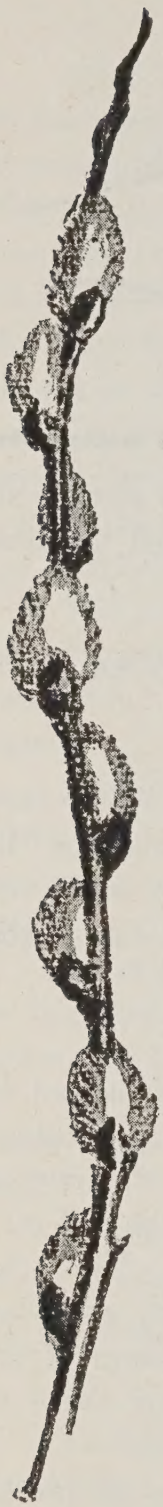
PREPARATION

A collection of well-budded willow sprays should be made the day before they are needed for the lesson and placed in water over night. From this material the teacher may choose several of the best single twigs, each bearing from six to ten catkins, and arrange them in jars of wet sand so placed that each pupil has a good view of one specimen.

METHOD

After moistening the cakes in their paint-boxes, the pupils should be led to examine the twigs, so as to be able to describe the character, growth, and colour in detail. Beginning with the stem, the pupils should observe its line of direction and number of joints, also whether it is thick or thin, hard or soft, rough and dull or smooth and shiny; its green or brown colour should also be noted. Next, the catkins should be studied with regard to their shape, furry appearance, and play of colour. The angle at which they join the stem and the shape and colour of the scale that remains at the base of some of them should also have their share of attention.

The teacher may give the class a great deal of help by drawing on the black-board a large oblong proportionate in shape to the paper used by the class. The suitability of the dimensions of the paper to those of the twig may be discussed,



WILLOW CATKINS
(In pencil)

thus giving an opportunity for a lesson in composition, especially if a rectangle be drawn on the paper to inclose the spray pleasingly and allow for margins which may be cut afterwards to suitable widths.

Before beginning to paint, the class should be led to notice that while some of the catkins are behind the twig and only partly seen, others are in front hiding the stem. Those in front of the stem should be painted first.

Faint, sketchy pencil lines giving the direction the twig is to take on the paper, with the position and size of the front catkins faintly indicated, is a help in the water-colour rendering of the subject. The peculiar silvery sheen is obtained by leaving the white paper for the high light and rounding and shading with blue-gray, to which touches of pale pink, yellow, or green may be added if these colours are seen in the catkins being painted. If too much colour is allowed to dry on the light side, the silky look will be lost. After the catkins in front are finished, the parts of those behind the stem that are not hidden should be painted. Lastly, the stem with its differences in direction and irregularities of outline may be put in with wet strokes of the proper colour and, while the stem is still wet, dark brown may be dropped into its shaded parts. Rich red-brown should be used on the scales at the base of the catkins, leaving a small space of white paper on each for the shining spot.

If a part of the background appears vacant, the name of the plant or the initials of the pupil may be so placed as to give balance to the composition.

The willow twig may be painted on folded paper to form, with pictures of such specimens as horse-chestnut buds, green lilac buds, birch catkins, and blossoming twigs of red maple, one of the illustrations in a folder or booklet entitled " Spring Buds ".

THE DRAWING OF FRUIT

The illustration given below shows a small branch of fruit with its leaves rendered in ink values. The same spray might have been painted in colours in a manner similar to that used for the

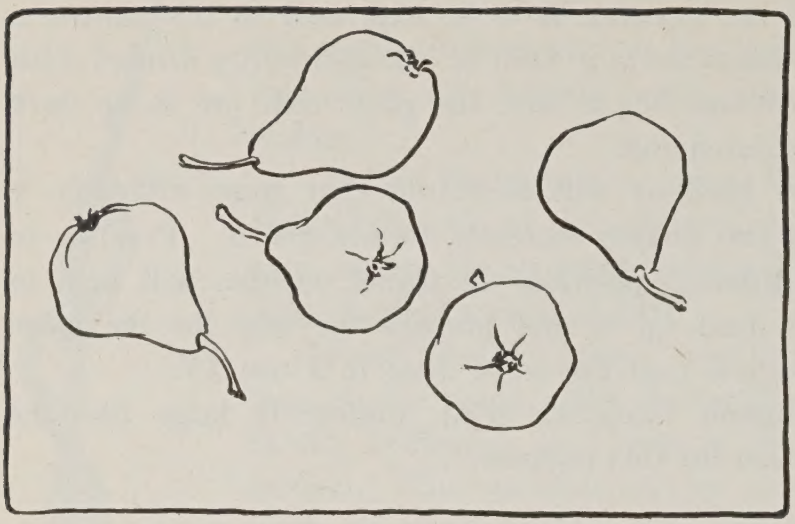
nasturtium on page 152. When the drawing is to be expressed in ink values, a silhouette of the whole spray may be made in a wash of ink sufficiently diluted with water to give the lighter tone. When this is dry, the parts that are to be dark are gone over again with the undiluted ink.

In making a sketch of this kind, it will be found that some difficulty is experienced in getting fruit and leaf shapes correctly foreshortened. Practice in drawing these shapes alone, in different positions in pencil outline, will help to overcome this difficulty and will lead up to and prepare the way for the more difficult fruit and flower compositions that are to be done in Form IV.

Good specimens of any common Canadian fruit, preferably large like the apple, pear, or peach, may be chosen for this purpose.

THE DRAWING OF FRUIT

If it is not possible to provide each pupil with a good specimen, a sufficient number should be placed on boards across the aisles to ensure a good view of one to each member of the class. Before beginning to draw, each pupil should study the specimen he is to draw, noting its proportions and the variations in its contour from curve to straight line. With the pencil held lightly under the hand, he should then block in the actual shape and size (if the paper will permit) of the fruit, with faint, sketchy lines near the centre of the paper. He should next hold the paper from him in such a position as to allow him to compare his drawing with the model as to proportion, contour, direction of the stem, and the placing of the blossom end in relation to the stem. Any necessary corrections may then be made with lines still kept faint and sketchy. He may now go over his drawing,



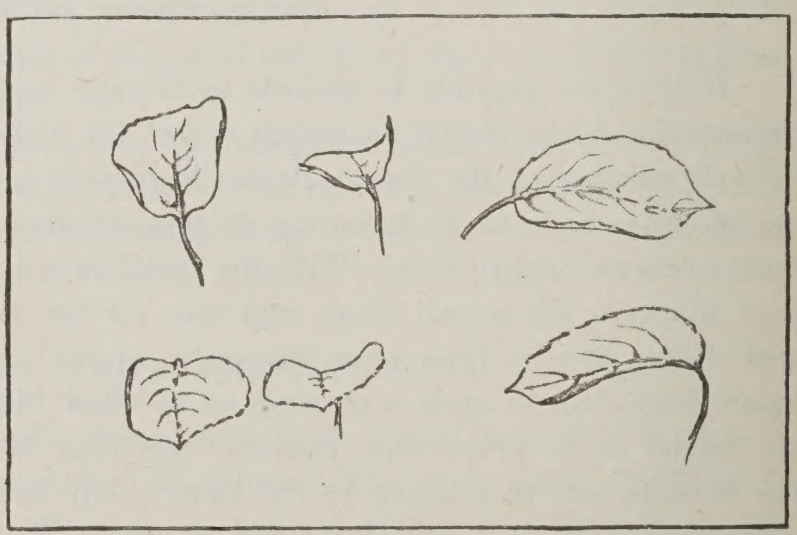
constantly comparing it with the model, and gradually strengthen his outline, until he has made it as perfect as he can. Little, if any, erasing should be necessary.

The models should now be turned so as to present a different view, and sketches should be made of the specimens in this position. The pupils should endeavour, in the placing of each new sketch, to make as pleasing an arrangement as possible on the paper. If they work in this way, feeling for the shape, the teacher will discover before long that they are beginning almost unconsciously to express texture and place accents.

A sheet of drawings of fruit like the illustration on this page may be followed by a similar sheet, giving several views of a single leaf.

A twig with the fruit and a few leaves on it may be attempted next. This twig should be chosen for its beauty and simplicity, and any superfluous leaves may be removed.

Fruit sprays may be pinned to sheets of cardboard that have been covered with cheesecloth and then placed in a leaning position against jars filled with wet sand that rest on the boards across the aisles.



Great care should be taken by each pupil to arrange the drawing on his sheet of paper so as to make a pleasing composition. The whole sketch should be lightly blocked in before any part is finished.

If for any reason it is desirable to make the sketching of a fruit spray a still more definite problem in composi-

tion, finders may be used to discover the best inclosing space and arrangement before the sketch is made; or the sketch may first be made with light lines and the finders may then be moved about on it to determine the inclosing space and arrangement that will result in the best composition.

THE ACCENTED OUTLINE

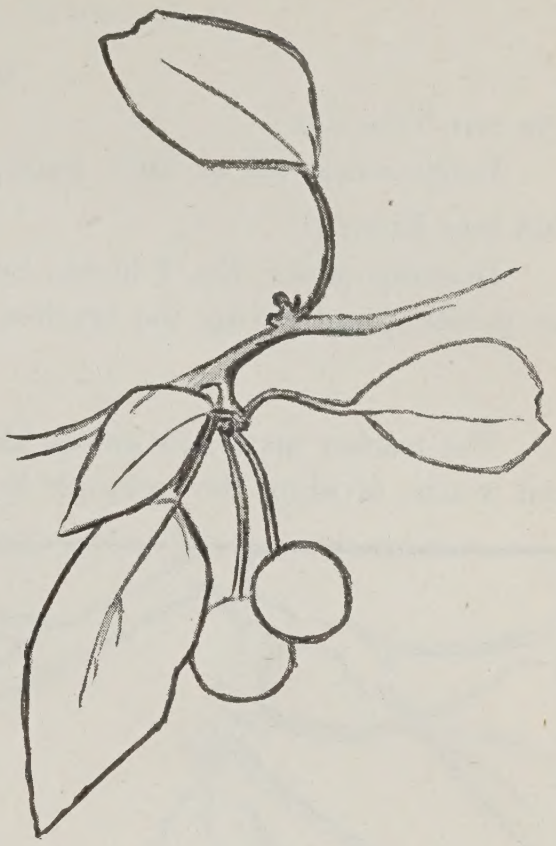
If the outline drawing is to represent the natural appearance as closely as the medium will permit, the accented outline is used because it suggests texture and light and shade, and also emphasizes those parts of the contour to which, for some reason, the person drawing it wishes to attract attention.

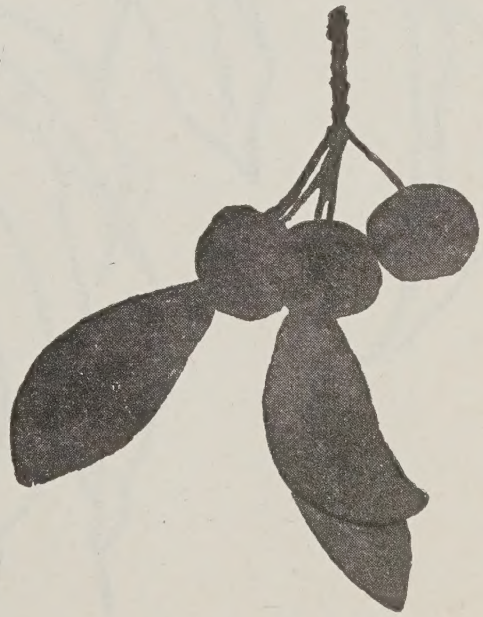
THE UNACCENTED OUTLINE

If it is desirable to simplify the drawing in order to use it for decorative purposes, the outline is made firm and of even width and strength throughout.

TREES AND LANDSCAPES

The teacher of Form III, Senior Grade, may make a rapid review of the series of lessons in tree and landscape drawing given in Form III, Junior Grade, before undertaking more advanced work. It is almost impossible to err on the side of simplicity, and nothing more elaborate than the illustrations in the Manual should be attempted.





DRAWINGS FROM FRUIT—BY FORM III PUPILS

LANDSCAPE IN INK OR NEUTRAL VALUES

MATERIALS

For the Teacher:

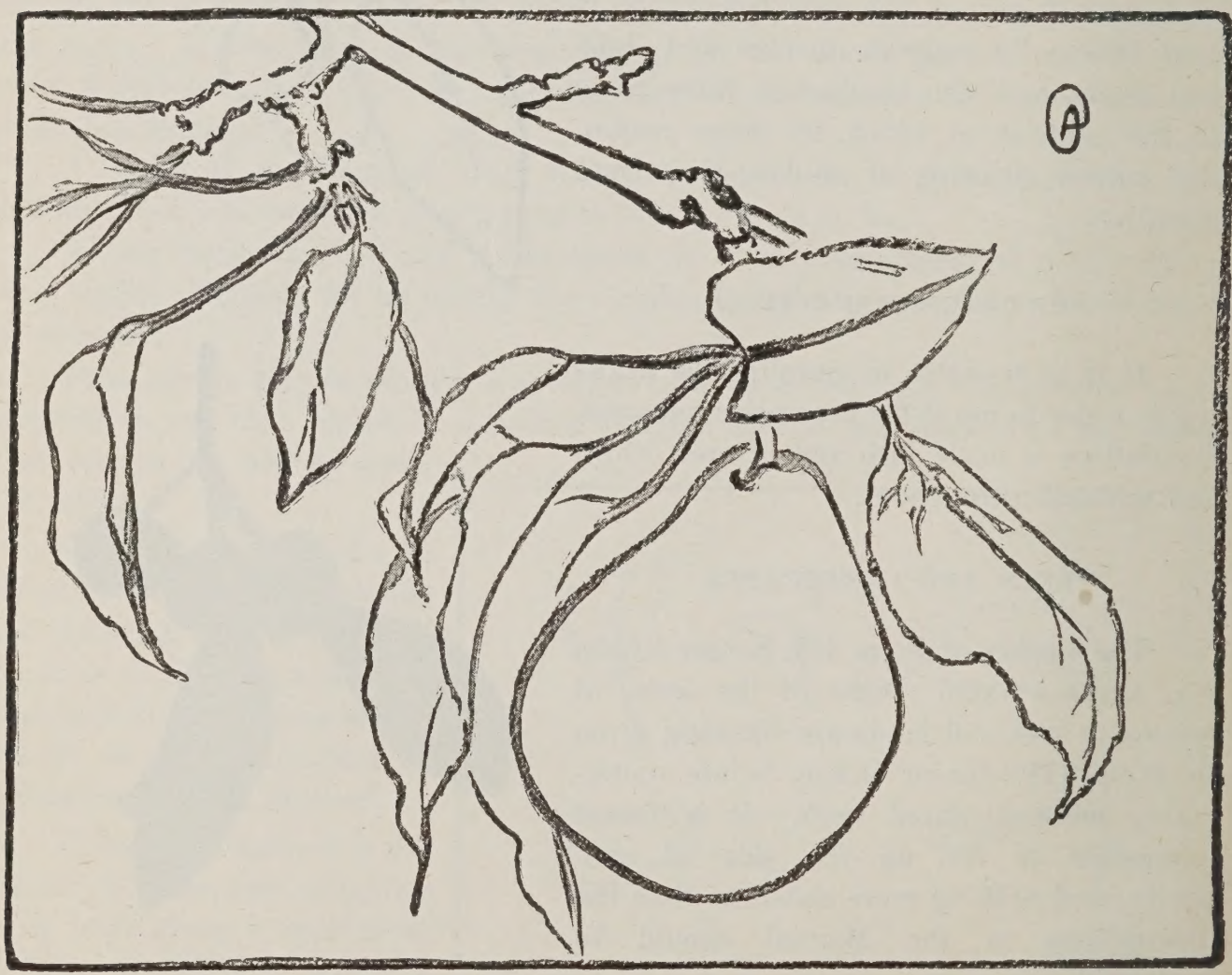
Large brush, ink or black water-colour, and drawing paper.

For the Pupils:

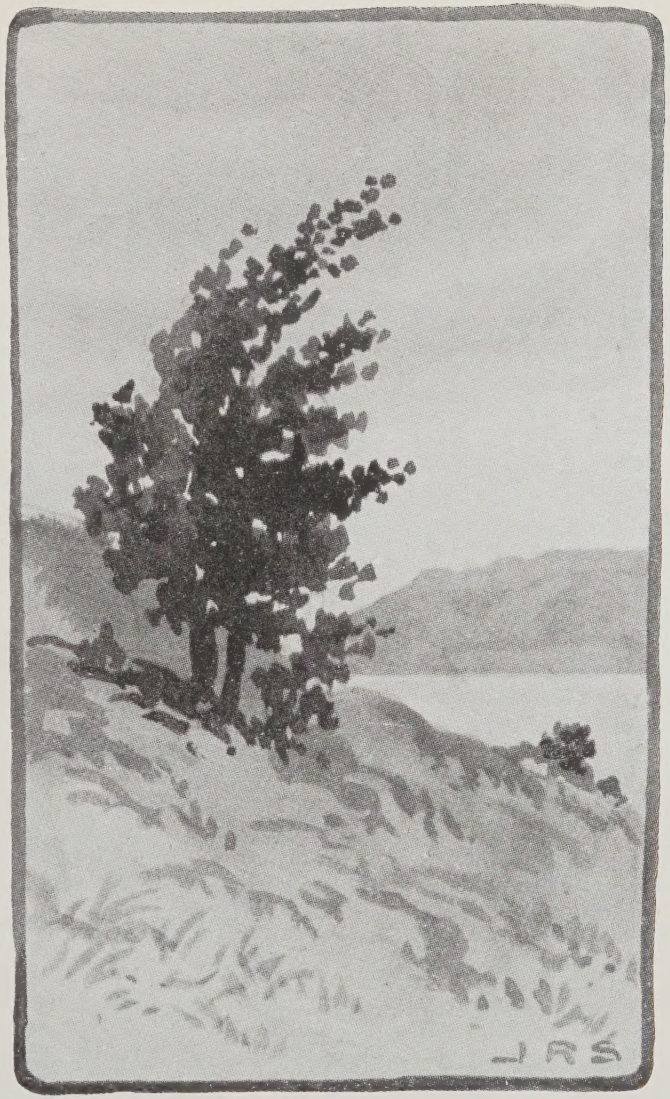
Drawing paper, No. 7 brush, ink or black water-colour, water, and clean rag for pointing and drying the brushes.

METHOD

The teacher may show on the black-board different arrangements of sky, land, and woods, dividing the rectangle by simple lines into unequal areas according to



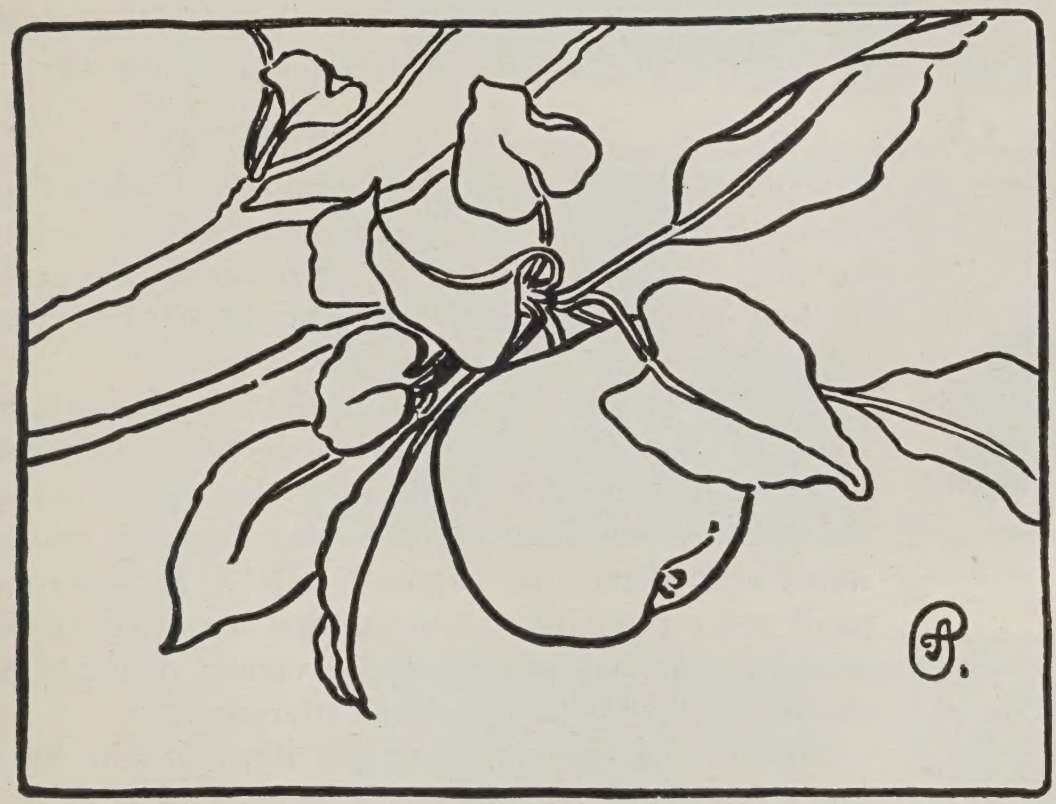
FRUIT COMPOSITION IN ACCENTED PENCIL OUTLINE—SEE PAGE 199


J.R.S

J.R.S

the laws of good composition, using a background of hill against a sky, a middle distance of woods, and a meadow or field in the foreground. He may also, with brush and ink washes prepared before the class, show the result desired, doing a simple landscape in the following manner:

A rectangle of good proportions is drawn on the paper and the arrangement of areas lightly indicated to suggest a hilly slope, an irregular mass of distant trees, and between the observer and the woods a meadow or field. Then with plenty of



DECORATIVE COMPOSITION OF FRUIT IN UNACCENTED INK OUTLINE

water the paper is evenly wet within the inclosure, and a brush full of the palest wash is laid quickly across the top of the sky on the wet surface till it meets the meadow below the hill and woods, either more or less than half-way down the picture. Without cleaning the brush, a brush full of a darker gray is used to paint the hill and fields; while the sky is still wet, a brush full of darker gray than that used for the fields is drawn across for the mass of woods, the different heights of the trees being pushed up into the still wet wash of the sky according to their different heights. The shapes of the trees should soften and spread

slightly without hard edges. The more rapidly the washes are made, the softer and more blurry the effect. All retouching should be avoided. The class then proceeds in the same manner, learning by experience the exact amount of wetness required to do washes smoothly, as some papers require more water than others.

Some very fine effects are obtained by painting pure black on the wet sky surface to make very dark masses of trees, as the spreading of the ink or water-colour black produces some very natural effects of the branching against the sky.

SUNSET LANDSCAPES

One of the privileges of the teacher is to open the eyes of his pupils to the beauties of nature which are free to be enjoyed by all. Almost daily to the one who watches, the dark masses of commonplace trees and houses are glorified by the sunset against which they are silhouetted.

The country boy or girl may paint a landscape from direct study, but in the case of the city child this is not always possible. Almost every pupil, however, has passed through the country some time and has then consciously or unconsciously stored up "pictures on memory's wall". In endeavouring to recall and express these pictures, what is distinct in the mind is sharpened, and what was but vaguely remembered takes clearer shape every time it is seen afterwards.

TREES

Prior to a lesson such as that illustrated by the page of sunset landscapes, the class should have studied trees, so as to be familiar with their shapes as seen against the sky.

Occasionally trees are seen against a hillside; in that position their greatest beauty is obscured. Yet the beginner, not realizing their height, nearly always depicts them as showing against the earth, and so succeeds in making his landscape appear to be a field sparsely set out with cabbages.

To make a beautiful sunset landscape one must realize that trees look their best when silhouetted against the sky and that this is the way we most often see them; one must also remember that they should be grouped so as to form a good and at the same time a natural composition.

Sunset Landscapes By Form III Pupils

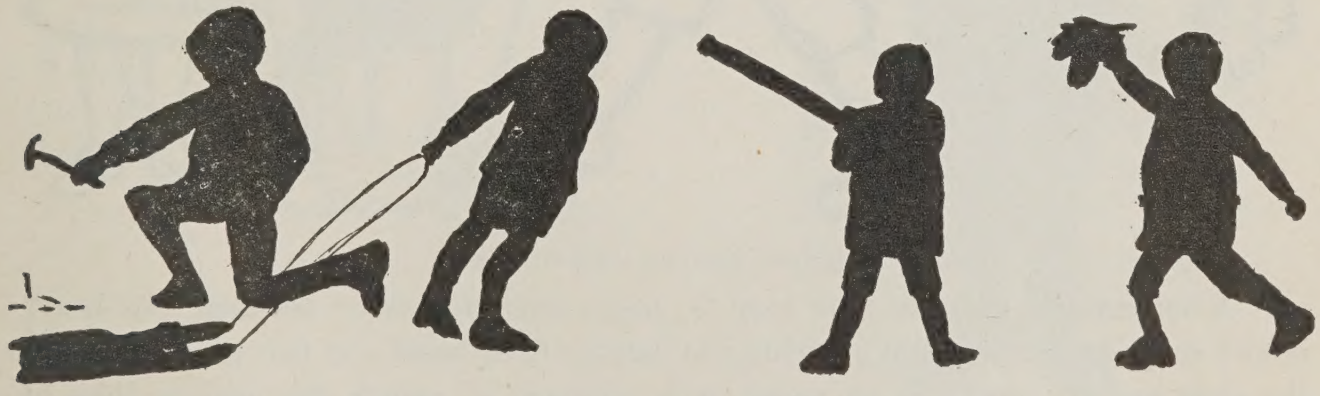
When these things have been considered by pupil and teacher and the materials for the lesson are ready, each pupil may float an orange wash all over his paper, striving to come close to the colour of the sunset sky as he remembers it. Into the upper part of this wash, while it is still wet, he may, if he wishes, touch deeper lines of orange and red, allowing these to melt into each other to show the sky as it looks just as the sun has disappeared.

The next step is to dry the brush, dip it into the school ink with which the rest of the picture is to be painted, and sweep an ink line across the page, to indicate the horizon or the long, slightly sloping outline of a hill. The ink is painted quickly and lightly over the orange wash from this line to the bottom of the paper. If a road is desired, it may be wiped out with the dried brush or a small piece of blotting paper while the ink is still wet. The orange wash under the blue-black of the school ink gives some very beautiful colour effects. The trees, rising from the earth and showing against the sky, are painted in when sky and ground are nearly dry. For these landscapes the ink should never be diluted. Two landscapes may be painted in the same lesson, so as to allow the first one to be dry enough for the painting of the trees by the time the second is half finished. When perfectly dry, the landscapes may be trimmed and mounted.

The page of sunset landscapes by Form III pupils are just as they were finished and were not trimmed or mounted before being reproduced. In the case of these landscapes a rectangle was first drawn on the paper, and the orange wash was kept within its limits.

DRAWING FROM THE FIGURE

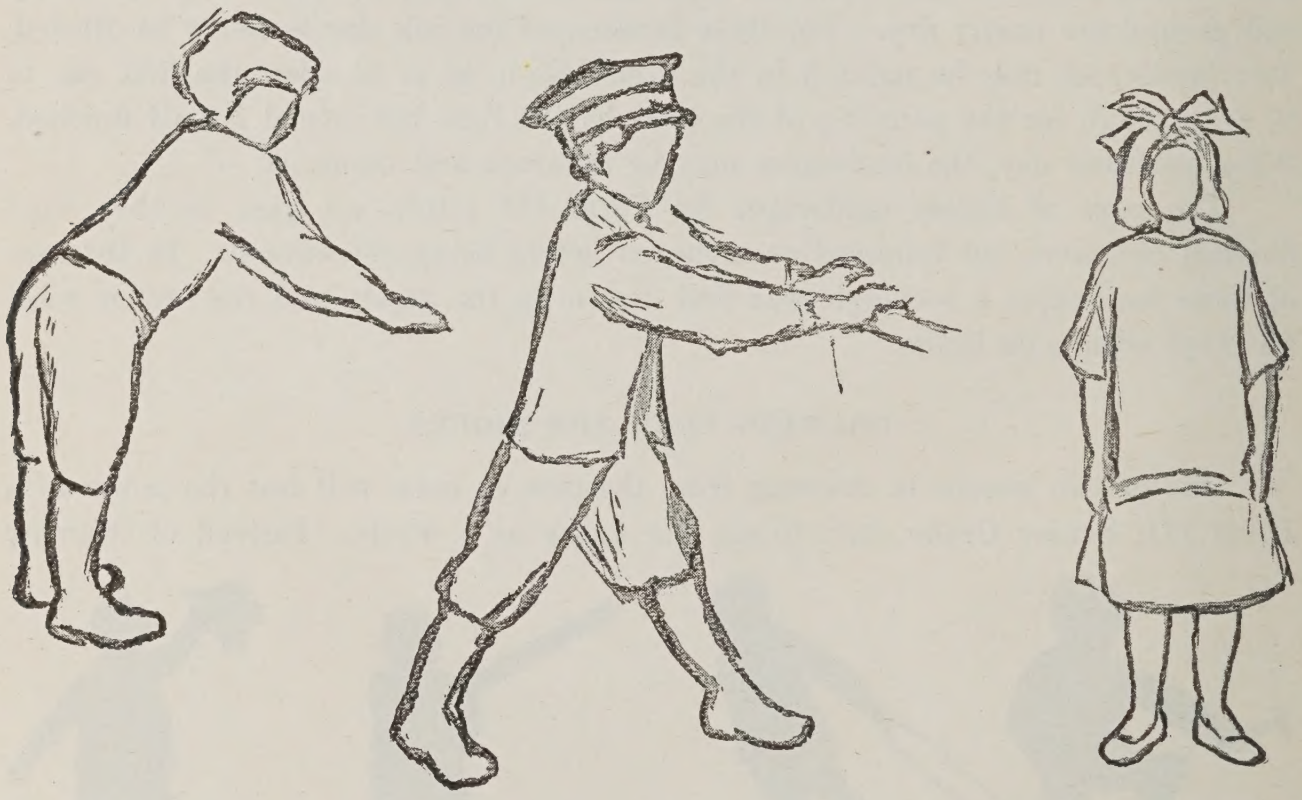
One or two lessons in drawing from the pose in mass will test the power of a Form III, Senior Grade class to see the figure as a whole. Instead of drawing



RAPID DRAWING IN INK MASS—BY FORM III PUPILS

almost altogether from memory after class study, as in Form III, Junior Grade, the Senior class may work from the model, that is, a pupil may be posed in some interesting position while the class rapidly makes a mass drawing of him. He should not be allowed to pose longer than three minutes unless he is in an easy position such as sitting, and should be cautioned not to keep the pose a moment after he feels the least discomfort. Pupils should take turns in posing, and the teacher should not make the mistake of asking one pupil to pose oftener than the others.

Under these conditions pupils must necessarily work very rapidly; but when they can make rapid ink paintings or mass drawings of a figure so as to represent the action and general proportions well, it is desirable to pose the model in a comfortable sitting position that may be kept long enough to allow the members of the class to compare their drawings frequently with the model and test their accuracy by pencil measurements.



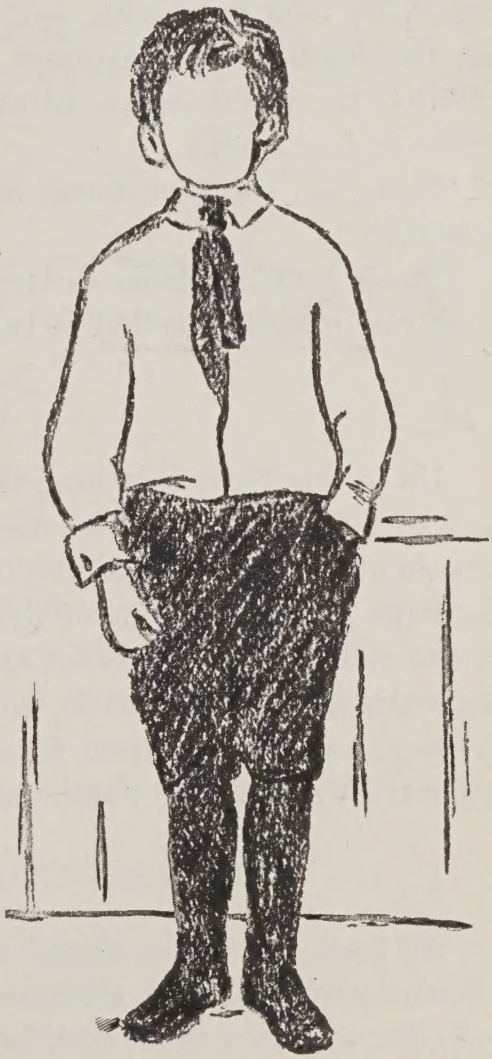
QUICK PENCIL SKETCHES

A ten-minute exercise that may be taken advantageously between two heavy school subjects, is the rapid sketching of pupils, each posed for two minutes, while the class quickly blocks in on paper, with charcoal or pencil, the leading lines of

the model and the general shape in outline. These should not be finished drawings, but should consist of the actual steps to be taken in drawing from the pose, and should be so lightly done that, if desired, each drawing could be brought to completion without erasures. Greater freedom of movement is obtained if the pencil is held loosely under the hand.

THE PLACING OF SPOTS

When a class has been taught to block in a model in outline, the problem may be varied in an interesting way by choosing a girl with dark hair and dress and white pinafore, or a boy with dark hair, dark trousers, white cap, and white sweater to pose, while the class places the dark spots, using either pencil or ink. The



model should be placed in a comfortable position where all of the members of the class will get an interesting view.

As with all other drawings, care should be taken to plan for a sketch of good size well placed on the paper. The pencil should be used to test proportion and direction. If the sketch is to be in ink, the pupils may begin at the top and put in the first dark spot, probably the hair, comparing their representation with the model to see if it is of the right shape and extending in the right direction. The second spot, which may be the part of the dress that shows above the pinafore, besides being of the proper shape must be at the proper distance from the first spot and related to it in size and direction. When all the spots have been carefully placed in this way, an ink line may be added to define the light parts of the figure.

If the sketch is to be in pencil, the pupils should first see that they can lay an even, dark tone by strokes laid close together. Good pencil handling demands that the depth of tone required shall be obtained with one layer of strokes. In outlining the white spaces, an attempt should be made to express texture by the quality of line used.

There are many uniforms and character poses which lend themselves to this treatment.

These drawings from children may be composed in rectangular inclosures, in which case some suggestion of background should be added.

HEADS AND FACES

Up to this Form sketching from the figure has been in mass, and the pupil has been kept from drawing the features by having his attention called to things of more importance to him at the time. It is advisable now to study very carefully the shape and proportions of the head and face in a front view and, in the side view of the face, the direction line also. The line of the hair helps to define the face and should be blocked in with care. If a class is taught to sketch the face in this way, a good foundation is laid for carrying sketches to a more finished point in Form IV, where the pupils may be taught to place the features.

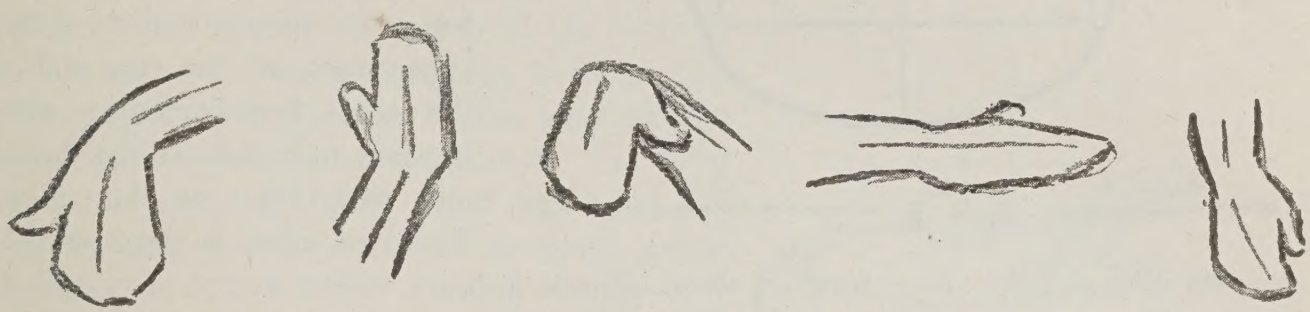
FEET AND HANDS

At least one lesson should be devoted to the drawing of feet and hands in different positions. No attempt should be made to put in any details, but the foreshortening seen in a front, back, or partly-turned-away view of the foot, should

BLOCKING IN THE FEET

be as carefully studied as it is in the drawing of manufactured objects, and pencil measurements and tests should be taken to aid the eye

A home or seat lesson on blocking in a pair of storm rubbers in various positions would be a valuable exercise.



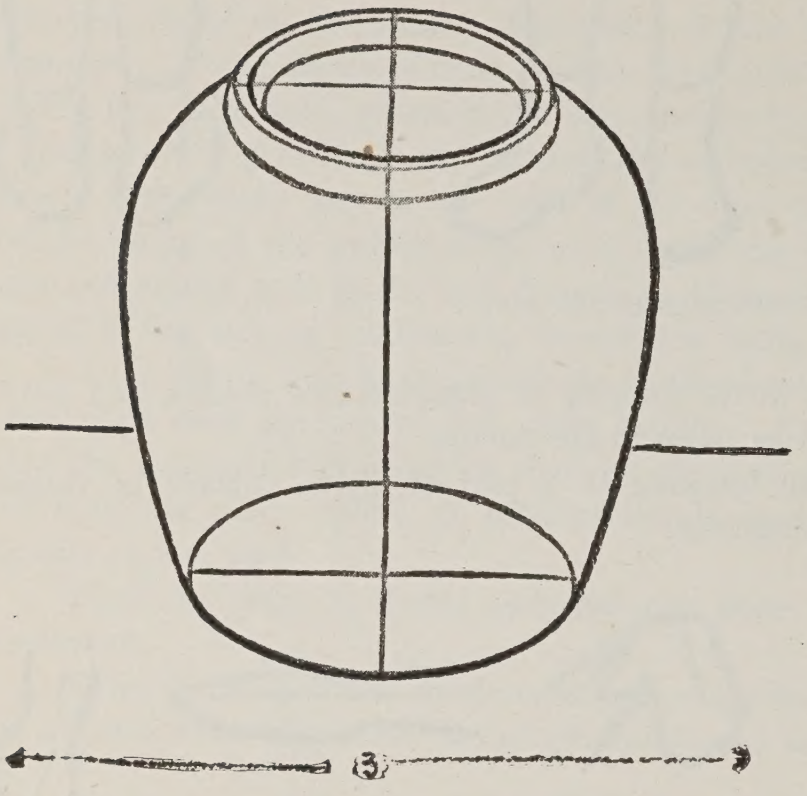
BLOCKING IN THE HAND

In drawing the hand the pupil should first place a direction line giving the axis of the hand, upon which the shape of the hand as a whole should be blocked in carefully. It would be unwise to try to carry the drawing further in this Form, as the direction in which the hand extends or the angle at which it joins the wrist, its general shape, and its size in proportion to the whole figure, are the things of first importance, and no attempt should be made here to draw the fingers.

DRAWING FROM MANUFACTURED OBJECTS

The teacher of a Form III, Senior Grade class should review with his class the instructions given in the text on Object Drawing in Form III, Junior Grade, before attempting to teach the drawing of objects which present greater difficulties.

A ROSE OR GINGER JAR IN OUTLINE



In the drawing of a rose jar or similar object, it will be noted that the neck is cylindrical even though it has very little height. If it be open, a problem arises that has not yet been considered, namely, the representation of the thickness of the rim and the appearance of the inner surface at the back. Three circular edges must be represented as ellipses or parts of ellipses. As the top is foreshortened, the appearance of the rim shows the same foreshortening and appears narrower at the front and back than at the sides. The rim must be represented by two ellipses; the space between these ellipses appears widest at the ends and a little wider between the two front edges than between the two back edges. The lower edge of the inside of the neck forms another ellipse of which only the back part is seen.

The shoulders of the object may show quite above the neck or disappear behind it, according to the position of the jar in relation to the eye but, as long as the jar is below the level of the eye, the shoulder line will show beyond the end of the ellipse where the side of the jar appears to join the neck. In drawing the jar, the shoulder line must form the upper part of the outline that is to represent the body of the jar. It will also be noted that the sides of the jar hide more than half of the ellipse at the base.

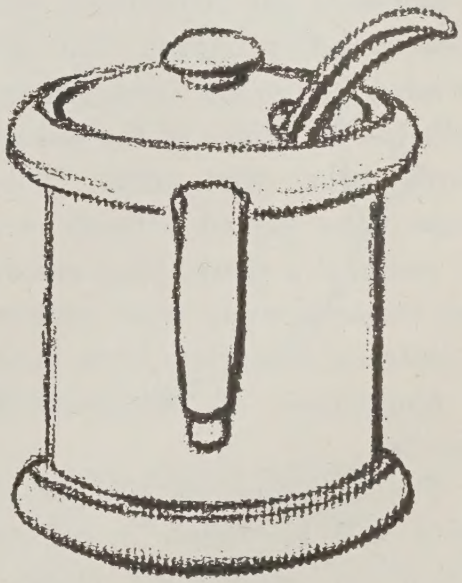
When these features in the appearance of the jar have been studied and a light outline has been drawn and carefully tested for accuracy, the drawing may be finished in any desired medium.

HANDLES AND SPOUTS

An object having a handle, lip, or spout should be blocked in lightly as though it were without any of these, and this faint outline made as perfect as possible before the spout or handle is added.

The correct placing of the lip or spout in relation to the handle in such objects as jugs, tea-pots, etc., may be tested in the following manner:

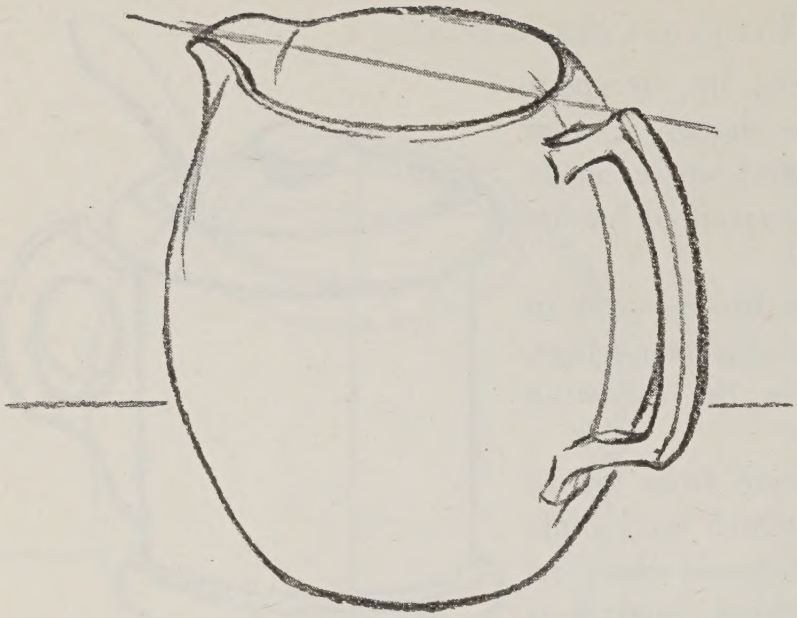
With a very light line locate from top to bottom the centre of the space which the handle covers on the body of the object. If this line does not reach the top of the object, produce it until it does. Now decide on the point that represents the centre of the top of the body of the object, and draw a light line through this centre point from the top of the line already placed in the other side of the ellipse. This will locate the centre of the lip or, if produced, will come directly over the centre of the spout, as the case may be.



The space covered by the spout where it joins the object is usually circular and, as its position changes from directly in front to the side, this space is foreshortened and part of the line which bounds it is hidden. When the spout is turned, the part of this circle that is seen becomes a part of a more and more foreshortened circle as it approaches the side, where it becomes in appearance a straight line.

THE GROUPING OF OBJECTS

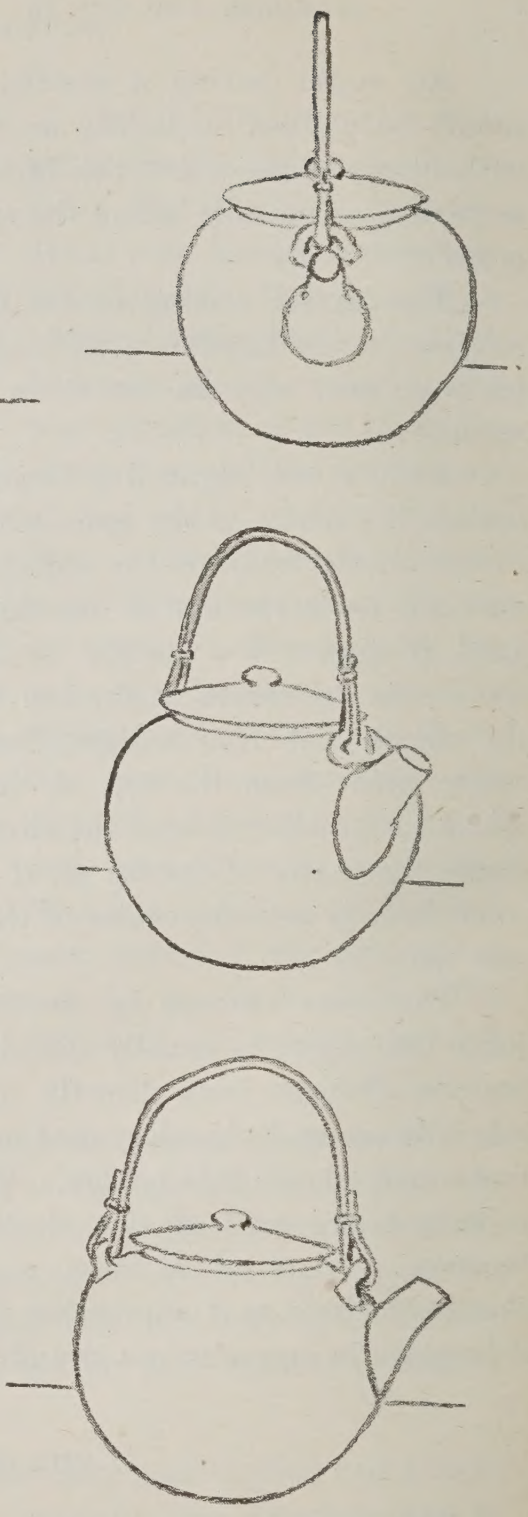
Objects that are to form a group should be harmoniously related in size, shape, and character; although variety is necessary, the objects in a group should



LOCATING THE LIP ON A CREAM JUG

not differ too widely in these respects. A very small object with a very large object is not pleasing; an object made up of straight lines and angles is out of harmony with one that is all curves; two objects that are in no way associated in use are incongruous when placed together. The lines of the objects should tend toward, rather than away from, each other. Groups when placed without care or selection may produce a distracting movement, the eye being attracted away from, rather than toward, the centre of the group, thus giving the objects the appearance of being on the point of separation.

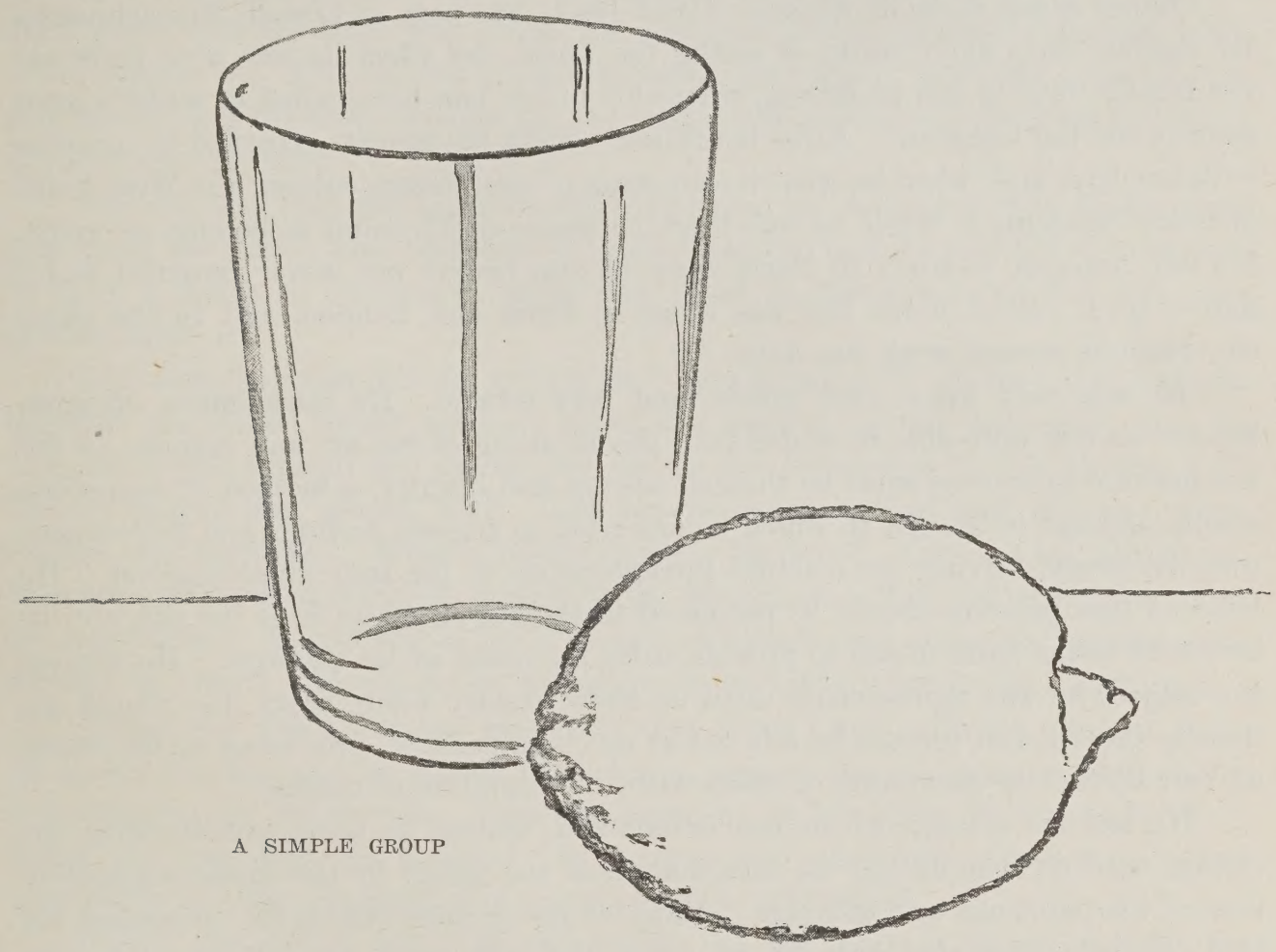
The grouping of two or at most three objects will be found a sufficiently difficult problem for elementary classes. When two objects are grouped, one should be placed in front of the other but toward one side so as to hide part of the base of the one behind it. In case of a third object in the group, it may



HANDLES AND SPOUTS

be placed at a short distance from the others, but must have the appearance of belonging to the group.

When a satisfactory group has been arranged, the size and place it is to occupy on the paper should be lightly indicated with pencil, and the correctness of the proportions tested with pencil measurements. The place in this space to be occupied by each object should then be indicated and each object lightly blocked in.



A SIMPLE GROUP

Comparison with the objects and pencil measurements should follow each step in the drawing until all the objects are correctly placed. When any necessary corrections have been made, the outline should be finished in the manner suggested in previous lessons. Greater emphasis should be placed on the nearer object in a group.

When coloured crayons are used, the first blocking in and all preliminary steps are made with charcoal. The frontispiece in this Manual is a group rendered in coloured crayons.

PICTURE STUDY

THE ARTIST'S MOTHER

THE ARTIST

James Abbot McNeill Whistler (1834-1903) was born at Lowell, Massachusetts. He had an early opportunity of seeing the world, for when he was nine years old the family went to live in Russia, where his father had been called to build a great railway for the Emperor. After his father's death the mother returned to America with her boys and, when he was sixteen years of age, James entered the West Point Military Academy. While he was there he made up his mind to become an artist. He left America to study in Paris when he was twenty and never returned to his native land. Most of his life was spent in Paris and London, and in the latter city his first earnest work was done.

He was very witty, very gifted, and very erratic. He made many enemies, because so few were able to understand the meaning of his art and because he did not hesitate to express what he thought openly and bluntly, a method of expression wholly opposed to his art, in which he has tried to suggest feelings and impressions very delicately, leaving their actual interpretation to the individual observer. He believed that pictures should be presented to the eye as music is to the ear, and he borrowed terms from music to provide titles for many of his pictures. He studied the subject he was representing until he knew exactly where every line should go, then in the finished picture he left out as much as possible, producing in the words of Van Dyke "the maximum of effect with the minimum of display".

He had the courage of his convictions and, instead of being influenced by his critics, went on stimulating the imagination of the public by the subtle suggestiveness of his paintings and etchings. Many of the pictures which he considered his best can be appreciated only by an artist and will never be understood by the general public, which he nevertheless succeeded in convincing of his genius. A picture such as the portrait of his mother, must always be popular, because of the tender reverence for the subject that the artist has expressed, perhaps unconsciously.

There are numerous anecdotes told about Whistler which a Form III Senior class would be much interested in and which would give them some idea of his unique personality. Teacher and pupils should contribute as much reliable information as they can gather concerning the artist and the picture under consideration.

THE PICTURE

Whistler himself speaks of this picture as an "Arrangement in Gray and Black", adding: "To me it is interesting as a picture of my mother; but what can or ought the public to care about the identity of the portrait".

In the original picture, now in the Luxembourg Gallery, Paris, the curtain is dark green and the wall gray, with the margins of the pictures showing softly white against it. The dress is a lustrous black, and the tender pink tinge of face and hands is all the more delicate for the setting afforded by the filmy white lace of cap and handkerchief.

The answers that are given to questions like the following will demonstrate how much the pupils have been able to glean from the picture and will also awaken in them a desire to examine it again and again in the new light that has been thrown upon it.

Why does the artist call the picture an "Arrangement"? Is he right in thinking that the public would not care about the identity of the portrait? Has he revealed in the portrait any of his own feeling for his mother? Did he love her? Did he respect and esteem her? How has he made us feel that she was quiet, refined, and dignified? What qualities show in her face? Can you see tenderness, strength, patience, endurance, power, faith, reverence? Had her son all of these characteristics? Would she be likely to pass carelessly over misdeeds, making weak excuses for them? Would she be impatient or sorrowful over faults in her son?

Notice how the artist has made the very room itself, with its straight lines, its square corners, and its simple furnishings, express the rectitude and simplicity that characterize the woman. Does the room, as he has arranged it, suggest anything else regarding his mother? Is it quiet and peaceful? Does it give any impression that she was lacking in reserve or quite otherwise?

Would the dainty but rich embroidery on the curtain, together with the delicate lace about her head and hands imply that she cared little for the beautiful or that she appreciated it? Might the pictures on the walls symbolize memories? If so, what would the curtain typify, and would the embroidery on it have any meaning?

Notice the beautiful balance of the picture and the long, curving line of the figure that tends to modify and bring into harmony the strongly contrasting vertical and horizontal lines of the room.

The light spots in the picture are so placed that the eye comes back again and again to the face and is held there, as the mind strives to read the thoughts that are behind it.

Whether deliberately or unintentionally, it matters not, Whistler has succeeded in making this portrait typical of the patient, capable, faithful, God-fearing mother, who has passed the meridian of life and whose work on earth is almost done. Into the eyes of every man who looks long at the picture a dimness must come, out of which will dawn the features of his own mother.

CHAPTER XIII

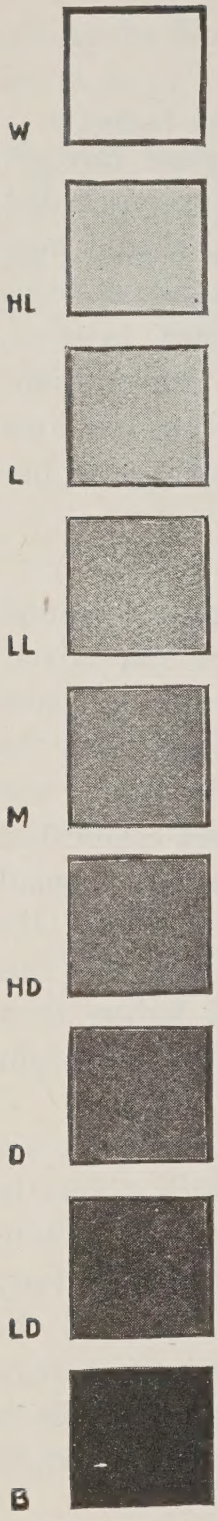
COLOUR

IT IS SUPPOSED that the Form III, Senior Grade pupil will have passed through the preceding Forms and will therefore be familiar with the colour exercises that have been taught in each. The work in Representation and Design should have further impressed the knowledge gained in these exercises, and it ought not to be necessary to do much reviewing. The knowledge that has been gained, however, should be arranged in an orderly way. With that end in view, the neutral value scale should be completed, and the six standard colours with the intermediate hues should be placed in relation to each other so as to exhibit a gradual change in hue and value.

THE NEUTRAL VALUE SCALE

The method suggested for giving Form III, Junior Grade pupils a mental picture of the three balanced tones between white and black, called respectively Light, Middle, and Dark, because of their position in the scale, will be found equally helpful in Form III, Senior Grade. The teacher should begin with the two imaginary heaps of powder and, after the impression of Middle, Light, and Dark in turn, as explained in the Form III, Junior Grade text has been established in the minds of the pupils, he should proceed to have them imagine a small quantity of the Light powder thoroughly mixed with the same quantity of the white powder so as to produce a new tone. The class should be led to see that this new tone, exactly between Light and white, darker than white and lighter than Light, is high in the scale when compared with Light, and therefore High Light is an appropriate name to give it.

Time should be taken here to impress upon the class that this value must not be connected with the high light upon the surface of an object which differs in value according to the texture of the surface. The lightest spot on an object with an unpolished surface is much darker than the lightest spot on one with a glossy surface. An object with a polished surface should be shown the class and the high light pointed out, that they may realize that it is lighter in appearance than white paper and must in no way be confounded with the value High Light, which is darker than white. We speak of *the* high light on an object; the definite article is not used before High Light, the value.



THE NEUTRAL VALUE SCALE

The class should next imagine a small quantity of the powder called Light thoroughly mixed with an equal quantity of powder Middle in value. The resulting tone will be lighter than Middle and darker than Light and, as it is low in the scale when compared with Light, it may be called Low Light. In the same manner the teacher may have the class imagine the blending of equal parts of Middle and Dark to form High Dark and equal parts of Dark and black to form Low Dark. As each tone is described its name should be written in place on the rungs of a vertical ladder drawn on the black-board, as suggested in the Form III, Junior Grade text.

An introduction of this kind should not take more than about ten minutes. The time remaining for drawing should be spent by the pupils in making a scale of three balanced neutral values between white and black, as follows:

1. The rapid freehand drawing of a vertical row of five equal rectangles an inch or more in size
2. The covering of the bottom rectangle with intense black
3. The adding of sufficient water to the black in the brush to produce a small quantity of wash, which should be tested and found to be exactly half-way between white and black in value, before it is placed in the middle square and marked Middle
4. The diluting of this Middle tone with enough water to produce a tone exactly half-way between it and white, which should be placed in the second rectangle in the row and marked Light
5. The adding of sufficient black to the middle tone to produce a tone half-way between it and black, which should be placed in the fourth square and marked Dark.

The top square in the row is to be left in outline.

During another drawing period these scales should be put up at the front where all can see them, and the class should choose those which exhibit the most nearly perfect balancing. When the exercises are returned to the pupils, each should write, beside every

one of his values that is imperfect, a note telling what is necessary to make it correct in value. A class exercise might then be given, having in view the making of one large neutral value chart for the whole class, for reference and comparison.

For this purpose the class might be divided into seven groups and each group given one of the values to make. Each pupil should draw a rectangle 3″ by 5″ and should make enough wash of the required value to cover this rectangle with a smooth, even tone. The class should be counselled to remember in preparing the values that washes are lighter when dry than when they are first applied.

A strip of white cardboard $4\frac{3}{4}$″ wide by 27″ long will be required for the mounting of the values. A vertical row of nine $2\frac{1}{4}$″ squares $\frac{1}{2}$″ apart may be drawn on this so as to allow $1\frac{1}{4}$″ margins at top and sides and $1\frac{1}{2}$″ at the bottom.

The top square should be left in outline and the bottom square painted black.

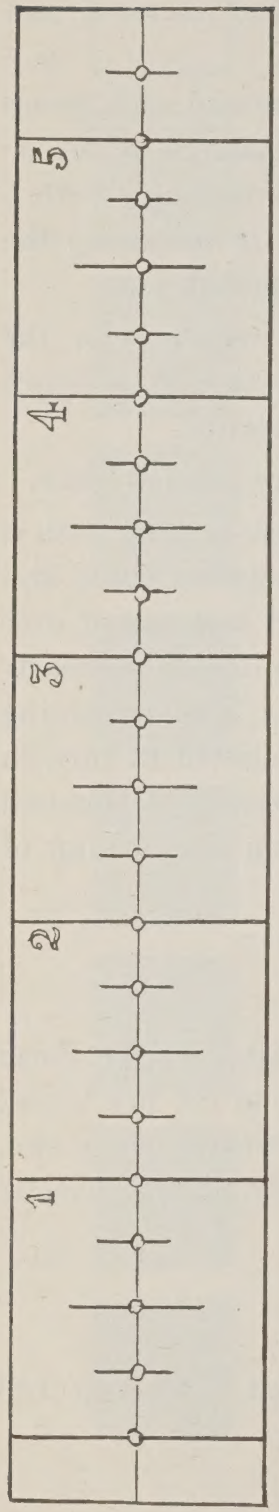
The class should now choose from the panels that have been covered with a wash of Middle value, the one that is most perfectly balanced between white and black. A two and one-quarter-inch square should be cut from it and pasted over the middle square on the strip of cardboard. In the same way the most nearly perfect Light and Dark should be chosen and pasted in place. The remaining High Light, Low Light, High Dark, and Low Dark should be selected in turn in the same way by the class and pasted in position. The careful choosing of balanced values in this way will do more to develop a nice judgment than the making of many individual scales.

BALANCED TONES IN GRAYED COLOUR

The balancing of three tones of grayed colour has been explained in the Form III, Junior Grade text. The class will proceed in a similar way to get five tones; first a strong dark tone, then a light tone, then one to balance between these two, then a fourth between the first and the middle tone and, finally, a fifth exactly between the middle and the darkest tone.

THE COLOUR CIRCLE

A diagram for showing the relation in hue and value that colours at full strength bear to each other may be made as follows:



MATERIALS

Each pupil should have a 9″ by 12″ sheet of drawing paper, a ruler, and a pair of compasses or a circle marker.

NOTE.—A circle marker or compass of cardboard, like the one illustrated, is more easily handled by the beginner than a regular pair of compasses. To make it, a strip of thin cardboard, one inch wide and five and three-quarter inches long, has a line ruled down the centre. Beginning one-quarter of an inch from the end, the inches, subdivided into half- and quarter-inches, are marked on this line. Holes are pierced at these points with a sharp pin and, to describe a circle, a pin is put through one of these holes and held in position as a pivot, while the sharp point of the pencil, placed through another hole at the right distance from the first, is moved around this pivot to describe the circle.

STEPS TO BE FOLLOWED

1. The drawing of a vertical line five inches in length from the middle of the top of the paper down toward the centre
2. The describing of a circle with a three-inch radius from a centre at the bottom of the line
3. The setting off on the circumference of six points, the width of the radius apart, beginning at the point where the vertical line crosses the circumference
4. The bisection of the portion of the circumference between each two adjacent points, so as to divide the circumference of the circle into twelve equal parts
5. The drawing of six diameters by joining opposite points
6. The describing of a circle with a half-inch radius at each point in the circumference and also at the centre of the large circle
7. The cleaning out of each of the thirteen small circles with a soft eraser.

When this chart has been prepared previously, it may be coloured easily in a half-hour period if the following plan be followed:

Colour Circle

COLOURING THE CHART

The pupils' paints should be in good condition, quite clean, and well moistened before the lesson begins.

To colour the chart the brush is first filled with yellow, and the seven upper circles, that is, the one for yellow and three on each side of it, are covered with yellow at full strength. No more yellow will be required. The brush is now cleaned thoroughly, then filled with red, and the circles for red, red-violet, and violet are covered with red at full strength. This colour is weakened slightly with water, and the circle for blue-violet is covered with it. The same slightly weakened colour is floated over the yellow in the circle which is to be red-orange. The colour in the brush is weakened still more and floated over the yellow in the circle which is to be orange, and weakened still further to cover the yellow for the yellow-orange circle. No more red will be required. After the brush has been thoroughly cleansed, it is filled with blue at full strength, which is floated over the one empty circle remaining and also over the red in the circles for blue-violet and violet. The blue in the brush is then weakened slightly with water and floated over the red in the circle for red-violet. Lest some of the red from this circle might have tinged the blue in the brush, it is washed out, and the brush refilled with blue, not quite at full strength, and this is floated over the yellow in the circle for blue-green. The blue in the brush is again weakened and floated over the yellow to form the green circle, then weakened still more to float over the yellow for the yellow-green circle.

The gray for the centre circle may be made by mixing a very little of each of the three primaries with water or by mixing two complementary colours. Care must be taken to keep the brush full, so that the colour will flow freely from it. The second colour in each case should be floated over the under colour in such a way as not to disturb the latter.

Paint cloths must be used for cleansing the brushes, so that the water may be kept clean until all the circles are finished.

When the paints are kept clean, this method will be found satisfactory, the only colour with which the pupils find any difficulty being the violet.

If this chart has been reasonably well done, it will show a gradual change of hue from yellow through orange, red, violet, blue, and green, back to yellow. The chart should be kept for reference, and each pupil should use his own to help him to determine the hue of any flower or other object that he is required to paint.

The change in value from yellow to violet should also be noted. It will be

seen that yellow is the lightest colour in the circle and may be said to stand on the High Light rung of the ladder of values that was prepared when the pupils were making a neutral value scale. Yellow-orange and yellow-green should be on the next rung, as they are Light in value. Orange and green are Low Light; red-orange and blue-green are Middle. Red and blue are High Dark; red-violet and blue-violet are Dark. Violet is the darkest of the colours and stands alone on the Low Dark rung of the ladder.

VALUE SCALES IN COLOUR

Any colour may be scaled from High Light to Low Dark by the addition of water for the values lighter than the standard and by the addition of black to the standard for the values that are darker.

From Form I, Senior Grade, up, the pupil has been having practice in making the tints and shades of colours as required in his work in Representation and Design; and there should be little difficulty now in making scales to show many different values of a colour. The scaling of one or more colours in this way would make an interesting and valuable seat exercise for individual pupils.

COMPLEMENTARY COLOURS

A glance at the colour circle will show that colours that are complementary to each other are at opposite ends of the diameters. The gray circle at the middle of each diameter records the fact that complementary colours will neutralize each other.

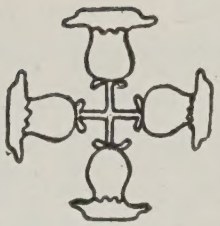
DESIGN

The work in Design for Form III, Senior Grade, should be a further development of the work taken in the previous Grade. In the Course as planned for each Form, it is taken for granted that the pupil will have studied the principles which the problems given in the previous Forms are intended to illustrate, although the classes are not expected to work out all the problems suggested for each Form. An opportunity for choice has been given.

The importance of accuracy in everything connected with Design should be kept constantly in mind and, from Form III upward, the greatest precision of which the individual is capable should be required of him. Any pupil who finds it impossible to do the work well should be constrained to use the simplest possible elements that will be in conformity with the problem under consideration.

MEASUREMENTS

The measurements to be used should be decided by the individual pupil after the class has discussed the question in relation to the work to be done, unless the teacher judges it more expedient to have the whole class use the same measurements in the particular case in point.

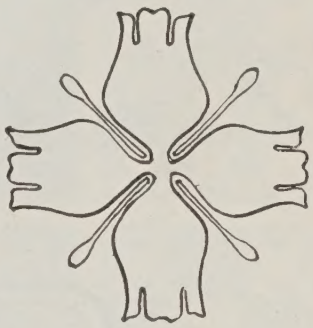


CONSTRUCTIVE PLANS

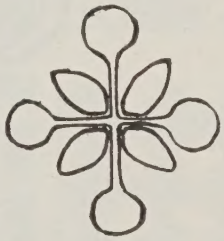
The Form III, Senior Grade pupil is not required to use any new constructive plans but, after his experience in the Junior Grade, he should be able to achieve better results with the same constructive plans that he used there.

UNITS OF DESIGN

The chief development in this Form should come through the designing of the single unit. The pupil is expected to take some natural form, such as a flower or any part of it, or some geometric shape and, using it as a motive or model, so simplify and refine it or if necessary reconstruct it while still keeping to the general plan of its formation, that it will be complete in itself and can be used alone or repeated in a border or all-over pattern with equally good effect.



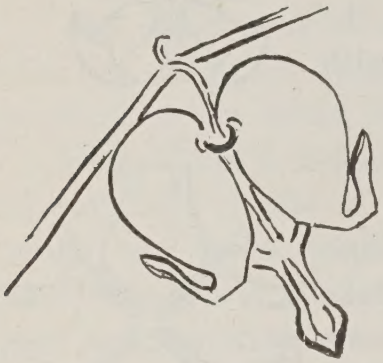
To be complete in itself, the unit must not look as though it were heavier on one side than the other or needed support of any kind; it must have stability; in fine, it must be balanced. The unit of design may be balanced regularly or irregularly, but the latter kind of balance should not be required of the pupil. He may make the two sides alike, thus producing bilateral symmetry or may increase the symmetry by making the top and bottom halves also alike. The unit may be balanced on its vertical axis or on both vertical and horizontal axes. When the four sides are alike, the effect produced will probably be that of a unit repeated regularly around a centre, in which case the resulting design is usually called a rosette. Balance necessitates more than the matching of one side with another. If the unit is too high in proportion to its width,

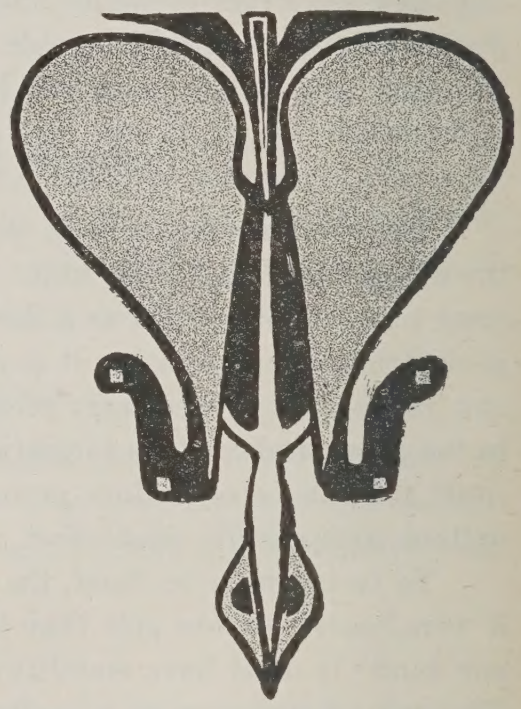


UNITS FROM FLOWER FORMS—DESIGNED BY FORM III PUPILS

it will look as though it needed support; it is evident that the width must be proportionate to the height, to produce balance.

The side views of some flowers are bilaterally symmetrical and of such a shape that little more than careful drawing is necessary to make them agreeable units of design. Among these flowers the bleeding-heart and the fuchsia may be especially mentioned. The top views of many others need very little modification to become symmetrically balanced. In almost all natural forms some little modifying is necessary in order to bring the shape into harmony with the character of the surface or article upon which the design is to be used. The simplifying of the form by





rejecting all details and retaining only the characteristic shape of the larger masses may be all that is necessary. The flower may merely suggest a shape which is widened in one place and shortened or lengthened in another and then balanced symmetrically. Sometimes an attractive part which is quite subordinate in the flower, is enlarged and emphasized in the unit. The designer gets the idea from the flower but, as long as he does not violate the laws of growth, he is free to make any modifications that will make it more appropriate for his purpose.

The stem end of a bilateral unit should be drawn very carefully, with a view to bringing it into harmony with the space it is to occupy or with the contour of

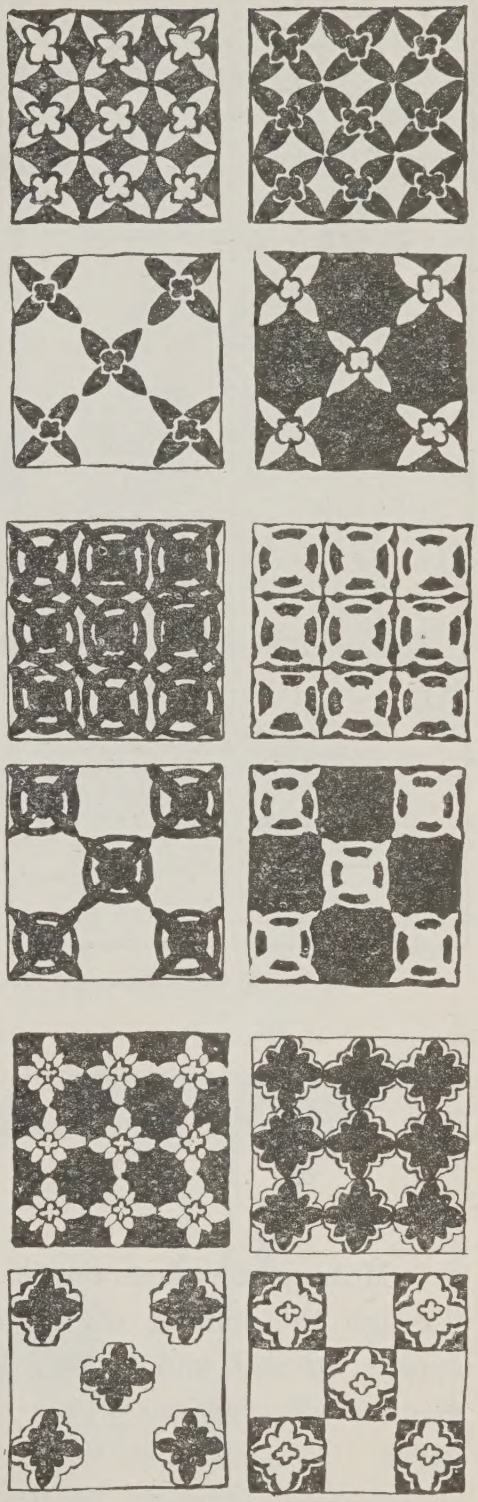
that part of the decoration which is nearest it. For example, a diamond-shaped constructive plan would suggest a pointed ending to the stem, while a pendant unit placed under the title of a book would require a broad, flat stem-ending, even though the unit were an inch or more from the lettering. A point turned toward the title would give us an uncomfortable feeling that the title was in danger of being split in two by the decorative unit, whereas one of the legitimate functions of this unit is to appear to support the title.

Geometric shapes are easily arranged so as to produce symmetrically balanced units. Two squares or two triangles with equal sides placed base to base will give a shape that may be modified along lines that radiate from a centre, so as to produce an attractive bilateral unit. In a similar way four squares placed together may be the foundation plan for any number of rosettes.

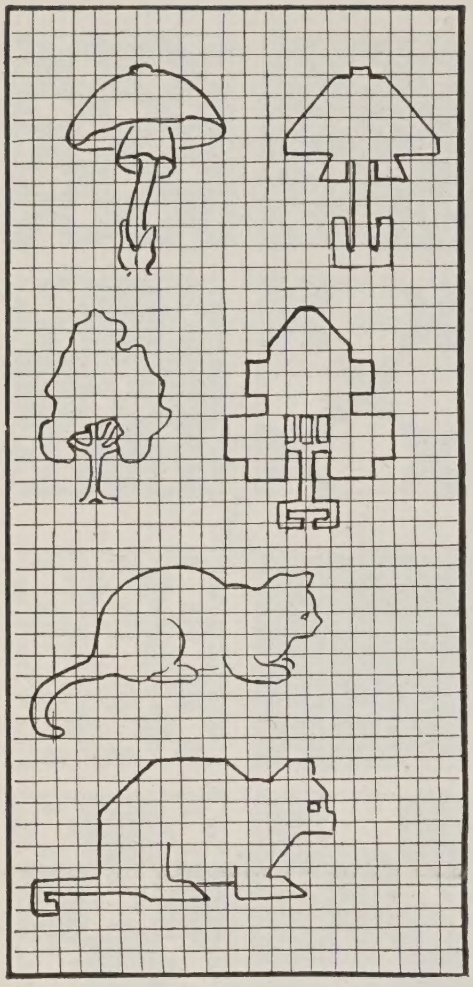
This definite designing of symmetrically balanced units should not be a difficult matter for a Form III, Senior Grade pupil, because most of the designs that he has made in the previous Forms have been balanced symmetrically without his being aware of it. He will probably realize now that much of their attractiveness was due to this fact.

SQUARED DESIGNS

Natural forms may be simplified and made suitable for use in Design by having their contours expressed in straight lines instead of curves. A careful pencil drawing of the natural form is made on squared paper. The outline is then redrawn along the vertical and horizontal lines that are nearest the contour of the original drawing.



ALL-OVER PATTERNS—DESIGNED BY FORM III PUPILS



SQUARED DESIGNS

Oblique lines that are parallel with the diagonals of the squares are permissible for joining the vertical and horizontal lines. For a bi-symmetrical unit the first half would be made, as stated above, from the original drawing; the second half would be the first half reversed. The design is not good unless it is simpler in outline than the natural form from which it originated. A squared design that exhibits a number of fussy little corners has defeated its own object in being.

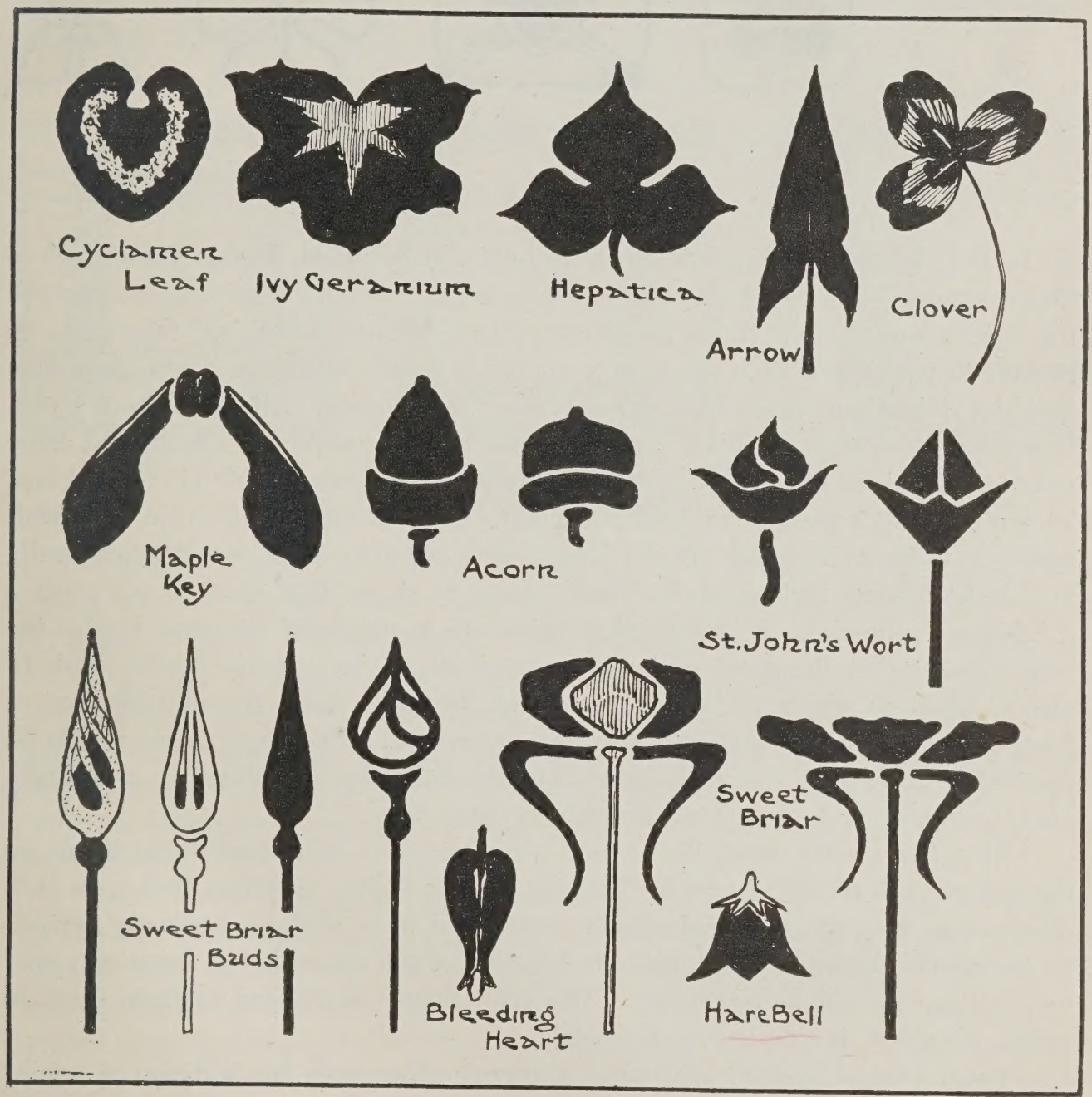
THE MODIFICATION OF UNITS

When an agreeable unit has been designed, the pupil should make modifications of it to suit two or more of the different constructive plans that he is permitted to use in Form III. He should then choose for repetition the unit which in his opinion will produce the most effective and harmonious pattern. Such simple forms of historic ornament as the trefoil, quatrefoil, and fleur-de-lis might be adapted to the square, the oblong, the triangle, and even the circle, as a preparation for the modification of the less easily handled units designed by the pupil himself. The doubling of the unit should be permitted, when by this means a new unit is formed that occupies the given space acceptably.

WALL-PAPER PATTERNS

Movement is desirable in a border or all-over pattern but, when it is achieved through the leaning of the unit toward its neighbour, the movement is apt to appear hurried and lacking in repose. There must be dignity as well as movement in any pattern which is to be kept constantly in view like that on a wall-paper. In such cases the movement should be accomplished through the placing of balanced units in rhythmic relation to each other. A unit that is longer vertically than horizontally is more dignified than one in which the proportions are

reversed. Constructive plans in which diamonds, drop squares, or drop oblongs are used, tend to bring about a rhythmic, lingering, upward movement of the units that is very satisfying to the eye. The colouring for the wall-paper should be two or three closely related tones of a more or less grayed colour, according to whether the paper is planned for a very light or a rather dark room. Consult the



PLANT FORMS THAT LEND THEMSELVES TO MODIFICATION

Form III, Junior Grade text for other points concerning wall-papers and for circumstances under which the designing of a pattern for one becomes a good school problem.

THE ADAPTATION OF THE TREFOIL TO THE SQUARE, OBLONG, CIRCLE, AND TRIANGLE

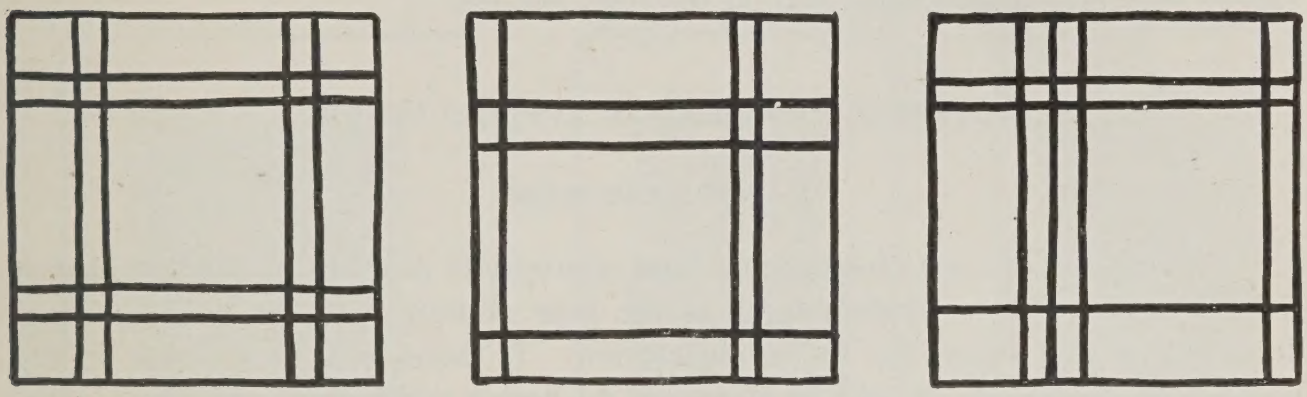
PLAIDS

In the making of striped patterns, the pupils in Form III, Junior Grade, had to consider spaces of definite width but indefinite length. When a plaid is to be designed, the spaces must have definite length as well as definite width, but they must be studied in relation to each other with a view to good proportion in the same way that the stripes and their intervening spaces were studied in the preceding Form. Examples of tartans and plaid ginghams will help the pupils to realize that large spaces and groups of smaller spaces are made by the crossing of the vertical and horizontal stripes that go to form the plaid. A good balance of large and small spaces is to be striven for. If the large spaces seem to stand out so prominently that it is difficult to look at the small spaces, it shows that there is too great a difference in the size. If the smaller spaces are so nearly of the same size as the larger spaces that the plaid looks as though it might be a poorly drawn check (a sort of plaid in which the spaces are all of the same size), the contrast that is necessary to produce a satisfactory balance is lacking. The large spaces should be noticeably larger than the small spaces, but the difference should not be sufficiently great to prevent a feeling of relationship between them.

The class should draw two or more three- or four-inch squares and break up the space in one of the squares by drawing regular groups of stripes that cross each other, so as to make a central square surrounded by a uniform border of stripes. In the second square, the irregular breaking up of the space that is frequently seen in ginghams should be attempted. The class should be limited to from three to twelve stripes in the designing of a plaid.

Two or three tones of gray or of a grayed colour with the addition of one or more stripes of white or black, might be used in the colouring of these plaids. If

the tone used is pale, the colour will require less graying than when it is stronger. The plaid should be planned first with very light pencil lines to indicate the width of the different stripes and spaces. In the colouring of the plaid one tone should be allowed to dry before another is applied over it or so that it touches it. Where the stripes cross, darker spaces result, which add to the attractiveness of the plaid. In all representations of woven materials the brush should be used rather dry so as to express the texture of the cloth.



APPLIED DESIGN

Among the articles that may be made and decorated by a Form III, Senior Grade class are calendars, place cards, menu cards, tally cards, blotters, and match-scratchers. Many different types of decoration could be used that would be in good taste on these and, for a special purpose such as the making of Christmas gifts, the class might be permitted to use any manner of decoration that has been taught in the preceding Forms. As a rule, however, the units of design that are to be applied by a Form III, Senior Grade class should be symmetrical, whether they are to appear as separate units or are to be repeated in a border or all-over pattern.

Certain principles with regard to the fitness of the decoration to the purpose of the article decorated, must always be borne in mind. For example, the decoration should in no way interfere with the use of the article. It should not be pictorial, although decorative compositions that consist of the breaking up of an inclosed space (usually rectangular in shape) by natural or other forms so arranged that they produce a harmonious pattern, are permissible when they are expressed in flat tones of colour.

The decoration should emphasize, or should appear to be governed by, the structural elements of the article. Thus, an appropriate border will appear to strengthen the edges of a book, card, tray, plate, rug, etc., and is always in good taste, whether it is at the extreme edge of the surface decorated or marks the inner boundary of a finely proportioned plain margin. The corners of any rectilinear surface may be supported in a similar way by a unit that conforms in shape to the corner. The ends of a towel, a rug, or a curtain may be emphasized by a border. Sometimes in the case of curtains or other hangings, the border is placed at the bottom only or is deeper there than at the sides and top.

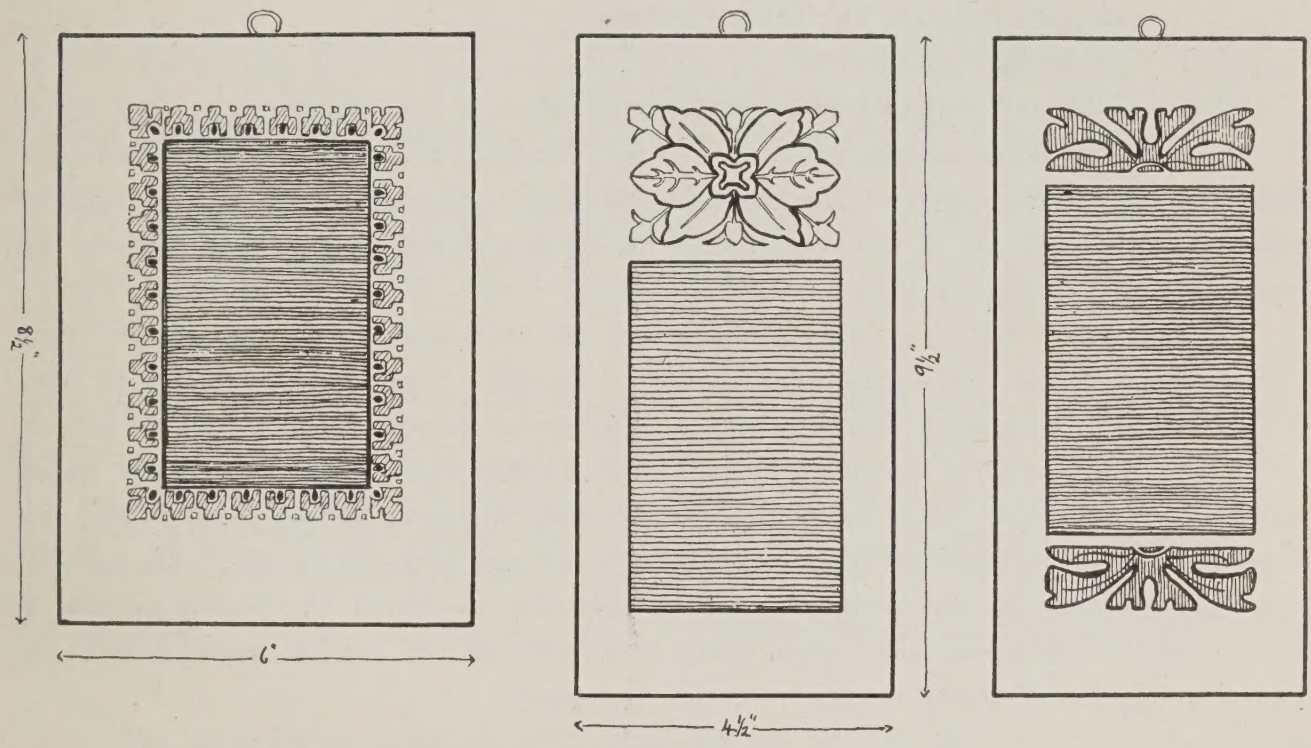
OPTIONAL PROBLEMS IN APPLIED DESIGN

MATCH-SCRATCHERS

The making of a match-scratcher is an appropriate problem in Applied Design for Form III, Senior Grade pupils, as the type of unit that the class has been designing is well suited for its ornamentation. If there is to be a choice in the manner of decoration, it will be necessary to decide what shape this is to take, before the dimensions of the article are decided upon. Everything that goes to the making up of the match-scratcher should be related to the rectangular piece of sand-paper, as it is the essential portion of the article. If the ornamentation is to be in the form of an inclosing border, the mill-board or heavy cardboard foundation of the match-scratcher will need to be broader than if the ornamentation is to go at one or both ends only. In either case, 3″ by 5″ is a serviceable size for the sand-paper. The longer dimension of both mill-board and sand-paper should be placed vertically. A satisfactory size for the mill-board when an inclosing border is to be used is 6″ by 8½″, but 4½″ by 9½″ will be in better proportion when the decoration is to be placed at the ends. The mill-board may be covered with thin cotton or linen cloth of some light, grayed tone that will harmonize with the colours of the room for which the match-scratcher is intended. The light browns, usually called tan and fawn, and the soft gray-greens are generally harmonious. The directions given the Form III, Junior Grade class for the making of the pen-wiper cover should be followed in making the mount for the match-scratcher.

The design should be prepared on a sheet of paper of the same size as the mill-board and traced on the mount after it has been constructed. The following steps should be taken in preparing the design for the 4½″ by 9½″ match-scratcher:

1. Draw a rectangle $4\frac{1}{2}''$ wide x $9\frac{1}{2}''$ high.
2. Draw the vertical diameter of the rectangle.
3. Mark the $\frac{3}{4}''$ side margins that the width of the sand-paper allows.
4. Allow the same or a slightly deeper margin at the top and a margin of at least $1\frac{1}{4}''$ at the bottom.
5. Supposing that $2\frac{1}{4}''$ of the height be taken for top and bottom margins, these, with the 5″ that must be allowed for the sand-paper, will leave $2\frac{1}{4}''$ of the height for the decoration. If the decoration is to be at the



top only, a rectangular space 2″ high and of the same width as the sand-paper should be occupied by the unit, leaving a $\frac{1}{4}''$ space between this rectangle and the panel for the sand-paper, which should also be drawn. If the unit is to be placed both above and below the sand-paper panel, a rectangle $\frac{7}{8}''$ high and 3″ wide should be drawn $\frac{1}{4}''$ above this panel, and another of the same size should be drawn $\frac{1}{4}''$ below it. It will be seen that the width of the sand-paper panel governs the width of the decorative units.

6. After the plan has been prepared as above, a suitable bilateral unit that will occupy the space planned for it should be designed and drawn in

this space. The design is now ready to be traced on the cloth-covered mount.

For constructing the mount the following things should be in readiness:

A $4\frac{1}{2}''$ x $9\frac{1}{2}''$ piece of mill-board

A $5\frac{1}{2}''$ x $10\frac{1}{2}''$ piece of cover cloth

A gummed cloth suspension ring (or other suitable device for hanging the match-scratcher)

A $4\frac{1}{4}''$ x $9\frac{1}{4}''$ piece of drawing paper covered with a suitably-tinted wash or all-over pattern, for lining the back

A 3″ x 5″ piece of sand-paper

A $4\frac{1}{2}''$ x $9\frac{1}{2}''$ piece of carbon paper for tracing.

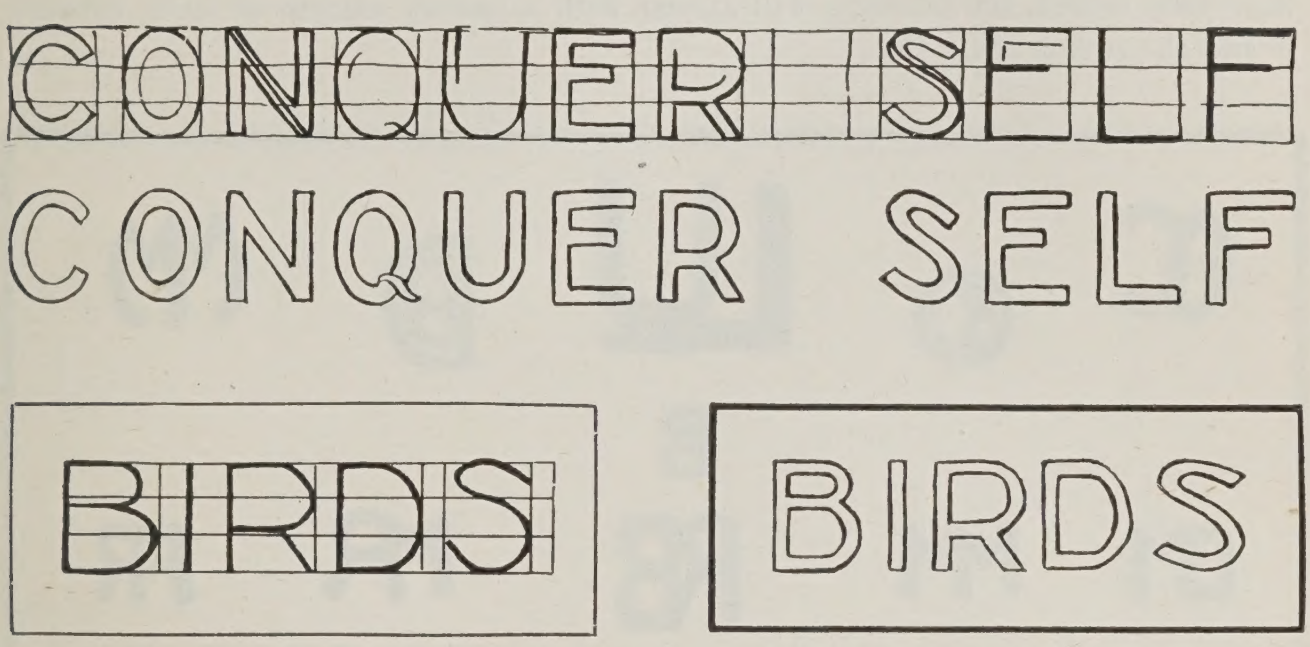
Consult the lesson on the pen-wiper in this Manual, Form III, Junior Grade, for further necessities and for directions for pasting. The gummed ring should be fastened in the middle of the top edge of the back of the mill-board just before the lining paper is pasted in place.

When the mount has been constructed, the outlines of the decorative units and of the panel for the sand-paper should be traced. The sand-paper should then be pasted firmly in place, and the mount put under pressure for a day or two or until it is quite dry. The unit may then be coloured and the sand-paper panel outlined. Care should be taken to keep the space between the sand-paper and the ornamental units not less than one-quarter of an inch in width. It will be remembered that in the designing of the calendar in Form II, Senior Grade, it was explained that the space separating two parts of the central panel should be narrower than any of the margins outside the panel.

BLOTTERS

The construction of a blotter cover would make a problem similar to the match-scratcher but easier, as there would be nothing to consider after it was constructed beyond the relation of the decoration to the dimensions of the blotter. An inclosing border, either at the outer edge of the blotter or at the inner edge of a good margin, would be a suitable decoration. A triangular or L-shaped unit designed to fit the outer corners of the cover or the corners of an inner panel would make a satisfactory ornamentation, as would also a central decorative unit that was in good proportion to the cover. The sheets of blotting-paper should be fastened in place at one or both ends by a brass-headed paper fastener, which might be placed so as to form a part of the decoration.

The lettering for Form III, Senior Grade, should be based on the same general plan of arrangement as that for Form III, Junior Grade, but whereas in the latter Grade the general appearance of the lettering was made light or dark to suit the purpose for which it was intended by means of the weight of brush stroke used, in the Senior Grade, the pupil is expected to block the letters in with double lines and draw them carefully in light pencil outline, before applying the ink or colour with which they are to be finished.

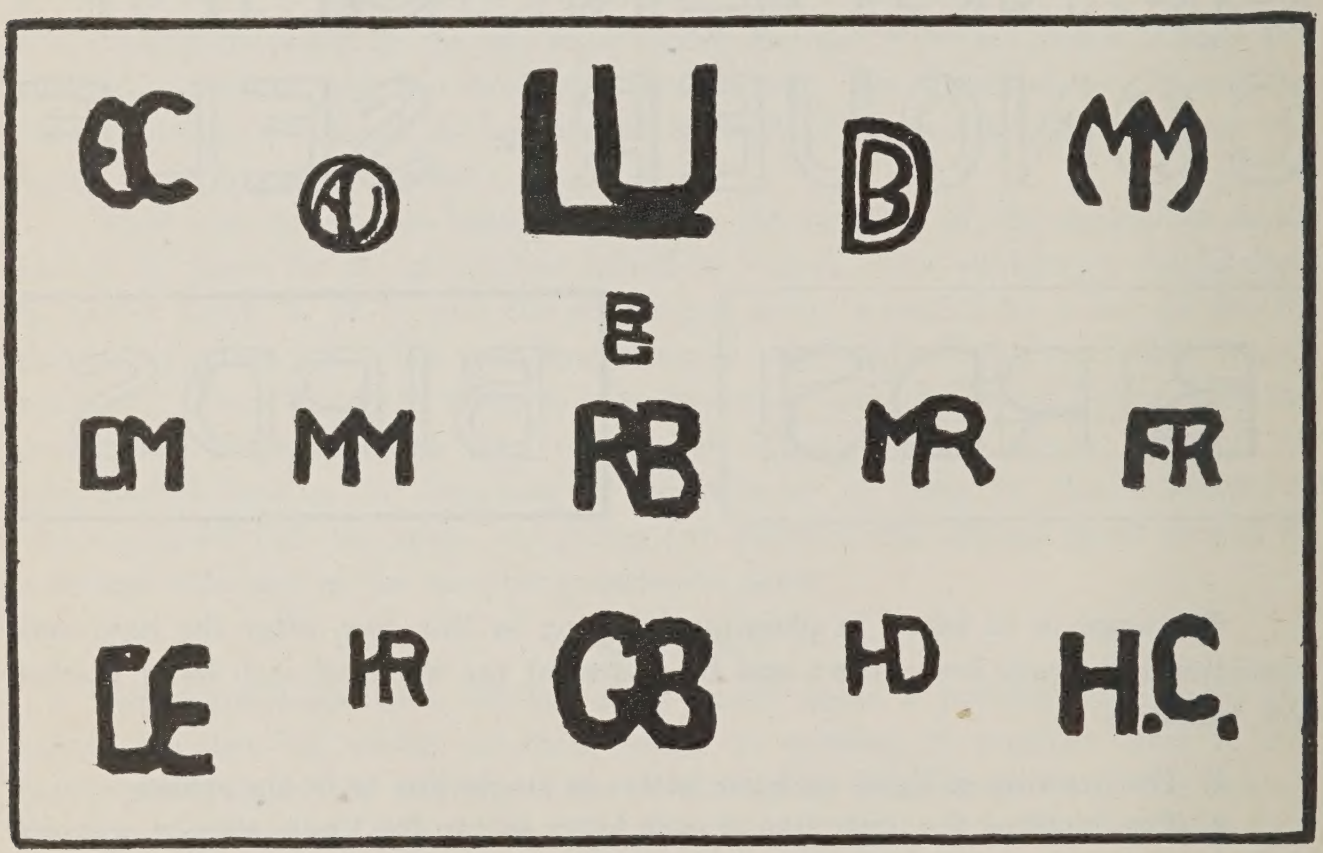


The steps to be taken in planning lettering in this way, after the light construction lines have been drawn and the space for the width of each letter marked off, would be:

1. The drawing of light, skeleton letters in single line to fit the spaces
2. The doubling the outer line of each letter within the limits already occupied by it, making the lines far enough apart to give the desired width
3. The getting of the necessary width for a cross line in any letter by drawing a line on each side of the cross line of the skeleton letter
4. The erasing of all construction lines within the letters and the correcting of the outlines, so that all the strokes used in the finished letters will be of the same thickness

5. The finishing of the letters in the desired colour
6. After the lettering is dry, the erasing of all the outer construction lines.

Sometimes the lettering is planned so that the space occupied by it is inclosed by an outer line. When an arrangement of this sort is desired, an inner rectangle for the lettering must be drawn within the inclosure, so as to be at the same slight distance from it on all sides. The inner rectangle should then be divided into spaces for the letters and, when the lettering is finished and all construction lines have been erased, the lettering will appear with a narrow margin of space between it and the surrounding line.



MONOGRAMS—DESIGNED BY FORM III PUPILS, AND PRINTED FROM BLOCKS CARVED BY THEM

CHAPTER XIV

FORM IV, JUNIOR GRADE

ILLUSTRATIVE DRAWING

TEACHERS of Form IV are urged to make as much use as possible of Illustrative Drawing in correlation with other school subjects.

In Form III, Senior Grade, special attention was given to the illustration of lines of poetry that describe the appearance of flowers in a landscape. A problem of this sort would be equally attractive to a class in Form IV, Junior Grade. Wordsworth's *Daffodils* in the Fourth Book being particularly suitable for illustration, a few lines from it might receive treatment similar to that suggested for pupils in Form III, Senior Grade. The steps that may be taken in treating it or a similar subject more pictorially are given in the succeeding pages.

The illustrations are by school children. The street scenes were drawn in charcoal by pupils of this Grade entirely from memory and without any previous preparation other than observation, on the way to and from school for a few days before the lesson, of the appearance of children on the street. The lettering was done rapidly in the same lesson, without time for careful planning.

The sunset landscapes by Form IV girls partake of the nature of Illustrative Drawing because of the descriptive quotation lettered beneath each. When these landscapes were made, appropriate lines were suggested by the class and, from the list given, each girl selected and made use of the one which she deemed best suited to her landscape.

The following selections are suitable for correlation with lessons on landscape composition and lend themselves to illustration in water-colours:

I like the pools so tranquil
That in the meadows lie;
They mirror stately tree trunks
And blue September sky.

The river flows melodious by
Whilst painted on its surface lie
The sunset's splendours.

I WATCH THE BUSY FEET
OF COUNTLESS LITTLE MAIDS
GO TRIPPING DOWN THE STREET
UNTIL EACH VISION SWEET
FAR IN THE DISTANCE FADES.

Out of the many problems in Illustrative Drawing suitable for this Grade, the teacher must choose those best suited to the ability of the class, for the few lessons for which there is time. The choice of medium should depend on what the teacher feels is expedient for the pupils. Great stress should be laid on good drawing and, whatever the medium used, the illustrations should be judged largely from the standpoints of form and good composition.

> All at once I saw a crowd,
> A host of golden daffodils
> Beside the Lake, beneath the trees,
> Fluttering and dancing in the breeze.

The following steps give the order to be followed in illustrating in water-colours the above lines from Wordsworth's *Daffodils*. The wetting of the paper is provided for, but many teachers will prefer to use dry paper, in which case the tenth step would be left out. When the wet method is employed, drawing boards, heavy mill-boards, or large slates are necessary.

1. Moisten the yellow, red, and blue cakes, cleaning them off if necessary.
2. Consider the subject with regard to the objects necessary in the picture to make it interpret the poet's description.
3. Determine the colours that will be required; which must be light and which dark.
4. Consider the effect distance will have upon the appearance of the different things in the picture with regard to size, shape, and distinctness.
5. Draw a rectangle of pleasing proportions that will leave a good margin on the paper, and lightly indicate the line of the horizon with pencil.

THE EVENING SHADES PREVAIL

FREDA MACINTOSH

THE DAY IS DONE

VALERA HUMPHREY

THE DAY IS DONE

MARGARET LOWRIE

THE DAY IS DONE

GERTRUDE FARQUHARSON

FAST FALLS THE EVENTIDE.

EDITH MILLER

SHADOWS OF THE EVENING
STEAL ACROSS THE SKY.

RITA TEW

6. Keeping in mind the thought of good spacing, lightly indicate the outline of that portion of the lake that is to come into the picture.
7. Lightly indicate the height and space to be occupied by each tree or group of trees.
8. Lightly block in where boundaries of masses of flowers are to come, remembering the great foreshortening in the distance.
9. Prepare three small pools of strong colour, one yellow, one blue, one green, so as to be able to get colour quickly. When you paint, work from both pool and cake.
10. Lay the paper flat on the slate or board and, with a large brush or a small piece of old, clean cotton, put a wash of water lightly and rapidly over the wrong side of the paper. Turn the paper over and wet the right side in the same manner, or dip the paper in water, wetting it thoroughly. If any air blisters appear, lift the corner nearest the blister, put water underneath it, and smooth the paper out lightly from the centre. Having removed the blisters, the paper is not to be lifted again until the picture is finished and the paper dry.
11. Rapidly put a wash of pale blue on the sky.
12. Add more blue and a little yellow and put a wash of blue tinged with green over the lake.
13. Paint the daffodils in the foreground (blossoms only).
14. Turn the slate top edge down and put a wash of pale yellow with deeper yellow touches to run from the blossoms already painted over the flower spaces near the foreground. Add more water to the yellow, and gray slightly for the more distant patches.
15. Turn the slate top edge up again, fill the brush with pale blue-gray, and put a line along the horizon; add a little green to the brush and, beginning in the lower edge of this line, put a wash of gray-green over the grass spaces, deepening the green and making it more intense as it comes toward the foreground.
16. Paint the tops of trees in the foreground a bluer green than the grass. Make the distant tree tops a grayer green.
17. Before the grass wash is quite dry, paint the daffodil leaves and stems that would show in the foreground.
18. Fill the brush with grayed violet and paint the tree trunks and any limbs that would show, making those in the distance grayer and less distinct.

19. Hold the drawings off, to see if any parts are too strong or need strengthening, and wipe the colour off with a damp brush or add stronger touches, whichever is necessary.
20. Strengthen the back edges of the lake with horizontal touches or lines of blue.
21. When the picture is dry, correct the marginal lines and strengthen them with a pencil line or a line of dark colour.
22. If any part of the picture is more unsatisfactory than the rest, use finders to get the best composition, which may then be cut out and suitably mounted.

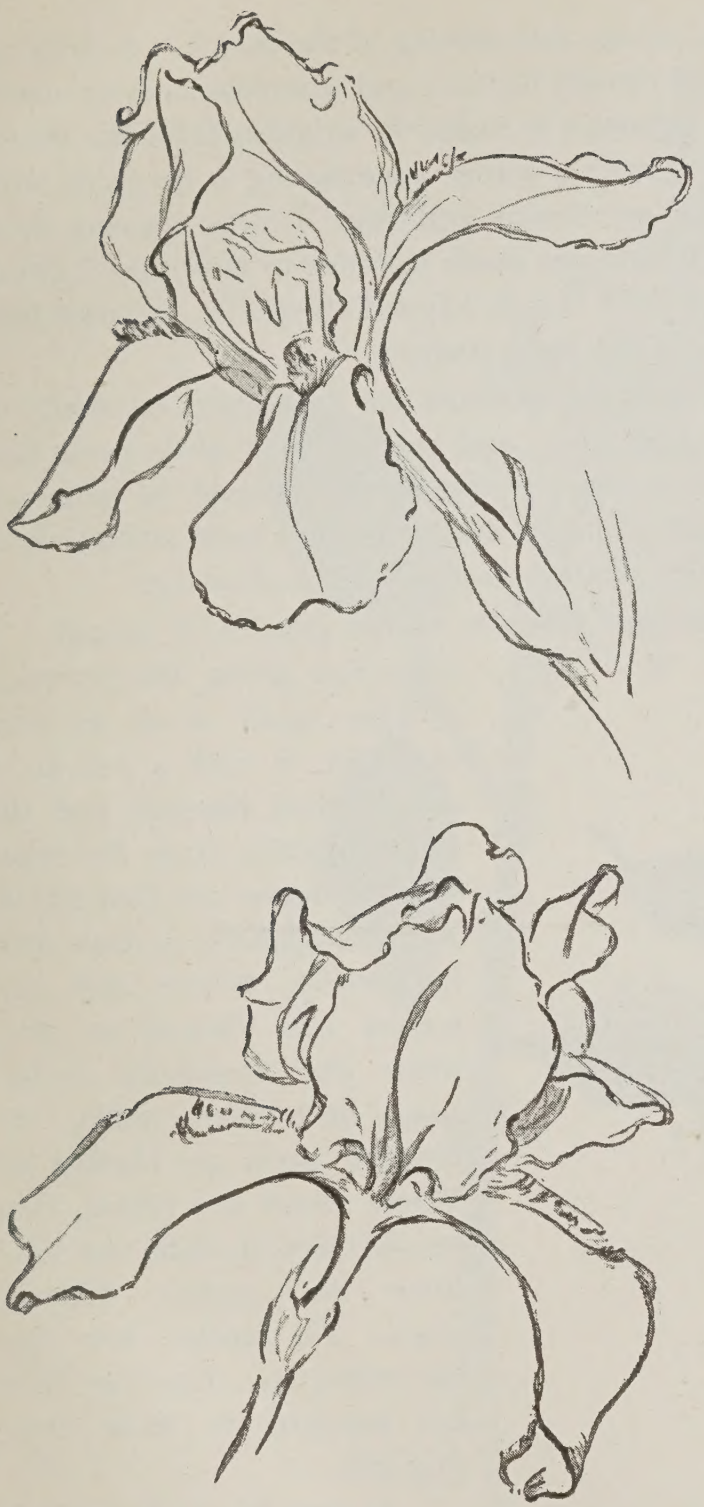
It is not to be supposed that the results from a lesson of this sort will be sufficiently good to make the framing of the drawings desirable. The poet's vision, however, will be clearer to the pupil who has undertaken to picture it, and he will be more keenly alive ever afterward to the appearance of masses of flowers, such as dandelions, bishop's weed, wild aster, yarrow, tansy, and wild mustard, which are so frequently seen in Canadian meadows and on Canadian hillsides. He will also observe more carefully and intelligently in the future, pictures of similar subjects painted by good artists, and will find in them a source of deeper enjoyment.

REPRESENTATION

Although the power to express in charcoal, brush and ink, and water-colours is very desirable, and a choice of mediums gives the teacher opportunity to vary the lessons in Art and keep the interest high in his class, it must not be forgotten that the pencil is the most important medium because of its general usefulness. The necessity for good drawing must not be lost sight of, no matter what medium is used; no beauty of colouring or of balanced values can atone for untruthful shapes and proportions, faulty joints and lines of growth, or a neglect of foreshortening. It is in order that these things may be emphasized that the Course for this Form calls for a careful study of details of structure and texture in plants, which are best expressed in pencil outline, and that it plans for the making of compositions which must first be drawn carefully in pencil outline.

FLOWERS IN PENCIL

For the study of such details as joints and bracts, only that portion of the plant which is being given especial attention should be finished, although the whole of



CAREFUL STUDIES OF THE BLOSSOM OF THE IRIS

THE IRIS, IN ACCENTED PENCIL OUTLINE

the specimen may be lightly indicated in the first placing of the sketch. A drawing which would make every joint and leaf equally distinct and complete in every detail would be lacking in artistic quality, although it might be valuable from the standpoint of Nature Study. It is wise, therefore, before undertaking a specimen with all its parts, to study individual leaves and flowers and other details, drawing them very carefully; for although one must leave out much in order to make his drawing interesting, he must know where every line that is left out should be, in order that those that are drawn shall be in exactly the right position.

The specimen should be chosen as far as possible for its beauty, especially of form, the best view should be determined upon, and any leaves or other parts that can be taken away without detracting from its appearance should be removed. Each pupil must also decide which part of his specimen he finds most attractive, as this is the part which should receive the greatest emphasis in his drawing.

The drawing should be made as near life size as the paper will permit. A light line giving the direction of the main stem is first swept in, in such a way as to ensure good placing, and the light direction lines for other stems or leaves are then added. After comparison is made with the model, flower and leaf masses are blocked in and, when any necessary corrections have been made, the separate parts are blocked in. Where stems are visible, they are sketched in with two light lines the proper distance apart. No matter how fine the stems are, these two lines are required to show them properly.

SWEET SYRINGA, IN PENCIL VALUES

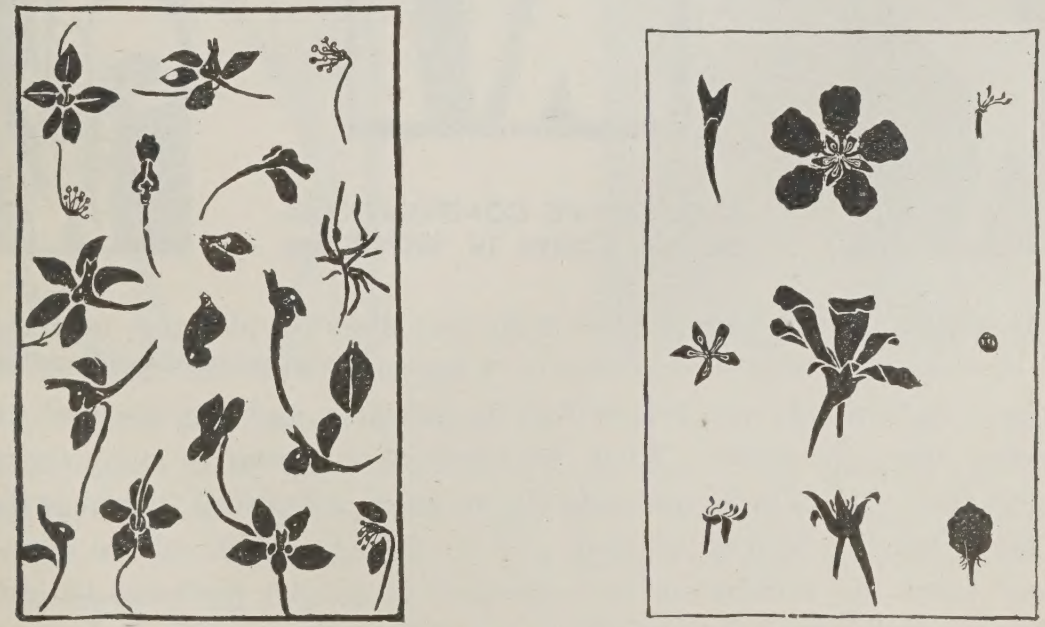
If care has been taken to compare with the model and correct all mistakes, the light

sketch is now ready to be finished in unaccented outline, in accented outline, or in pencil values.

The *unaccented outline* gives a decorative quality to the drawing and is used when the flower is arranged in a panel and intended as a design for inlaid wood or leaded glass, or for some similar purpose, where the pattern of the drawing is the feature to be emphasized. For this purpose, details are omitted, the line is made as simple but as strong as possible, and all parts are given equal weight.

To render the drawing in *accented outline,* the pupil should study the specimen to see what edges stand out sharply, what edges are indistinct or lost entirely, and where the deepest shadows are. He should then go over the first light sketch, gradually strengthening a line here, leaving it indistinct or broken there, putting strong, dark touches in the shadow near the spots where the high lights show, so as to emphasize the centre of interest that he has chosen, steadily trying to make the drawing express the qualities his study of the specimen has shown him that it possesses.

When the drawing is to be rendered in *values,* the value of each part is decided upon, and firm, even pencil strokes are laid side by side to produce that tone. These strokes may follow the general contour of the surface they represent, they may take a slanting direction, or may be drawn across the surface, but they should be practically parallel and rather short. The vein of a leaf provides a line where a



CHARTS OF FLOWER FORMS—PREPARED BY FORM IV PUPILS, TO BE USED BY THEM AS REFERENCE MATERIAL FOR DESIGN

set of strokes may be broken advantageously. Sharp edges and deep shadows will require strong touches, to give sharpness or depth of tone.

It is a difficult thing to make a surface light or dark and keep an even tone with a single layer of pencil strokes. A class should have practice in handling a single leaf, rendering it in different tones in order to acquire some skill in pencil handling, before attempting to render a more complex specimen in pencil values.

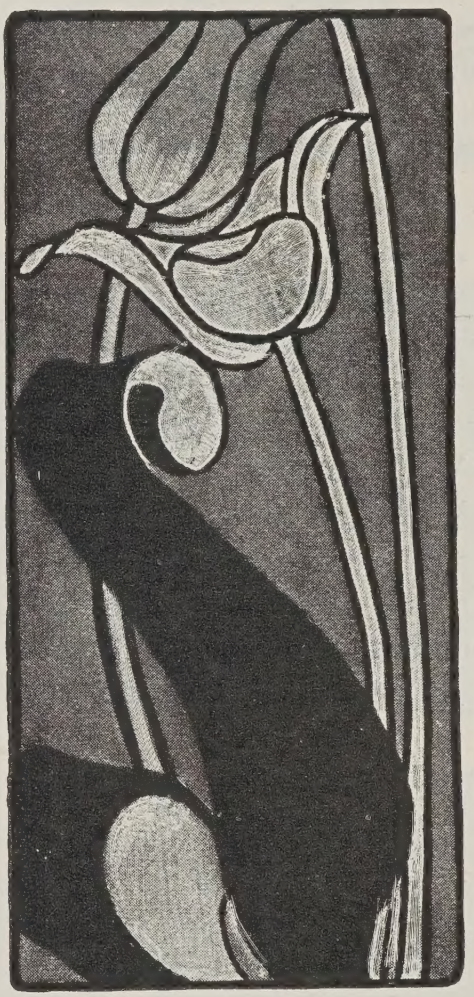
DECORATIVE COMPOSITION

DECORATIVE COMPOSITIONS
BY FORM IV BOYS

Good composition is necessary to make any drawing pleasing, no matter what medium or method of expression is used; it has to do with the choice of the model or specimen, its arrangement preparatory to drawing, and the size and placing of the drawing upon the paper. When we speak of a decorative composition, something more than this is to be understood; we mean a drawing in which the details have as far as possible been eliminated, and the flower or other motive used has been considered from the standpoint of a number of shapes that are to break up a given space in such a way as to produce a beautiful pattern. These decorative compositions form a step between pictorial representation in which we endeavour to

make as faithful a portrait as possible of the individual specimen that we are studying, and pure design in which the natural form suggests shapes that must be modified and made to conform to certain rules before they may be used legitimately.

In making a decorative composition we may have one or more specimens before us to help in making the composition, or we may work from a number of



drawings that have been made at some previous time. The arrangement will depend on the space to be filled and the way in which each shape drawn may be made to conform best to the others and bring about the harmony or mutual attractiveness of the whole. The shapes may be reduced to the most simple form possible, but the truth of the type must be maintained.

The use for which the composition is intended and the materials in which it would be worked out should be considered. Some materials present greater

limitations than others. If the drawing is intended for a poster, it should be striking, and the final outline may be quite heavy. If it is for a magazine illustration, a more delicate outline is desirable in finishing it, and this outline may be interrupted or broken in places and may be made even to suggest distance. (See illustration for June in Form III.) If, however, the composition be intended for a stained-glass window or an inlaid wood panel, or other similar object, each shape must be planned as a separate piece that can be fitted in. When we make our drawing, we must bear these things in mind and, while endeavouring to produce beauty, strive to avoid making a pattern that cannot be used for the purpose for which it is intended. The accompanying decorative compositions of tulips can be used for inlaid wood or for stained glass.

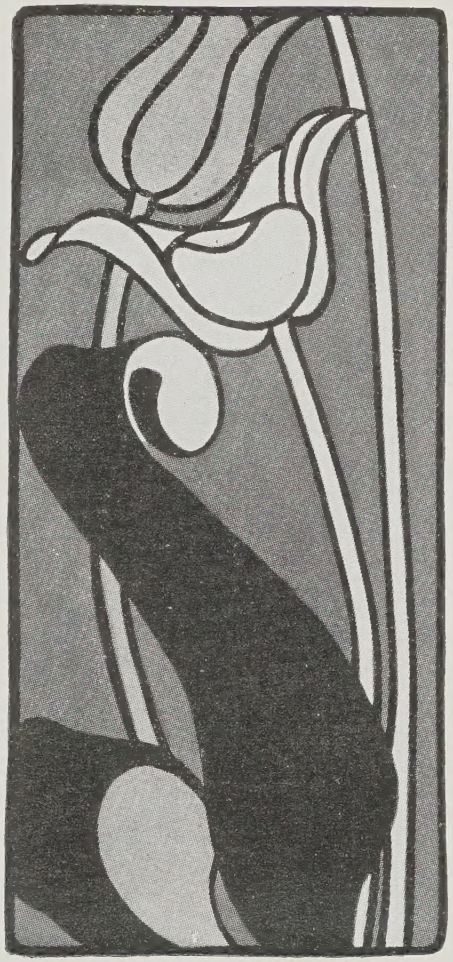
As has already been stated, the drawing for the decorative composition is first made in pencil outline. Two or three tracings may be made by each pupil from his pencil outline, to be finished in some of the different ways suggested below; or a choice of one of the different ways may be allowed so as to have in the one class, for comparison, examples of all of the different methods.

When the outline drawing is as satisfactory as the pupil can make it, he must decide whether it is to be finished in (*a*) black and white, (*b*) tones of gray, (*c*) gray with black, (*d*) one colour and black, or (*e*) tones of grayed colour. In any of these except (*e*) he may leave certain parts white; these white parts will be left untouched except for the final outline.

A sufficient quantity of each of the tones required is made up by itself in a depression in the lid of the paint-box or in some small, separate dish, and these tones are tested on another sheet of drawing paper to see if they are harmoniously related. A flat wash of the lightest tone to be used is then applied to the shapes that are to be covered with it and, when the adjacent parts are dry, the next wash is applied to the shapes for which it is intended. When all the shapes have been covered with the tones desired and are quite dry, a firm outline of black is put around each shape and also around the whole panel. (See illustrations.)

Drawings from flowers, landscapes, or objects such as utensils, etc., or from the figure, may be used in the making of decorative compositions.

1



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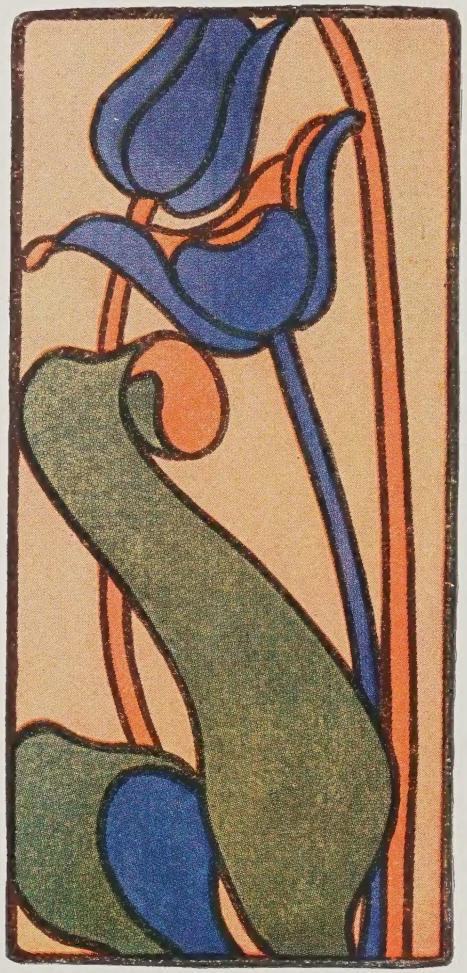


3

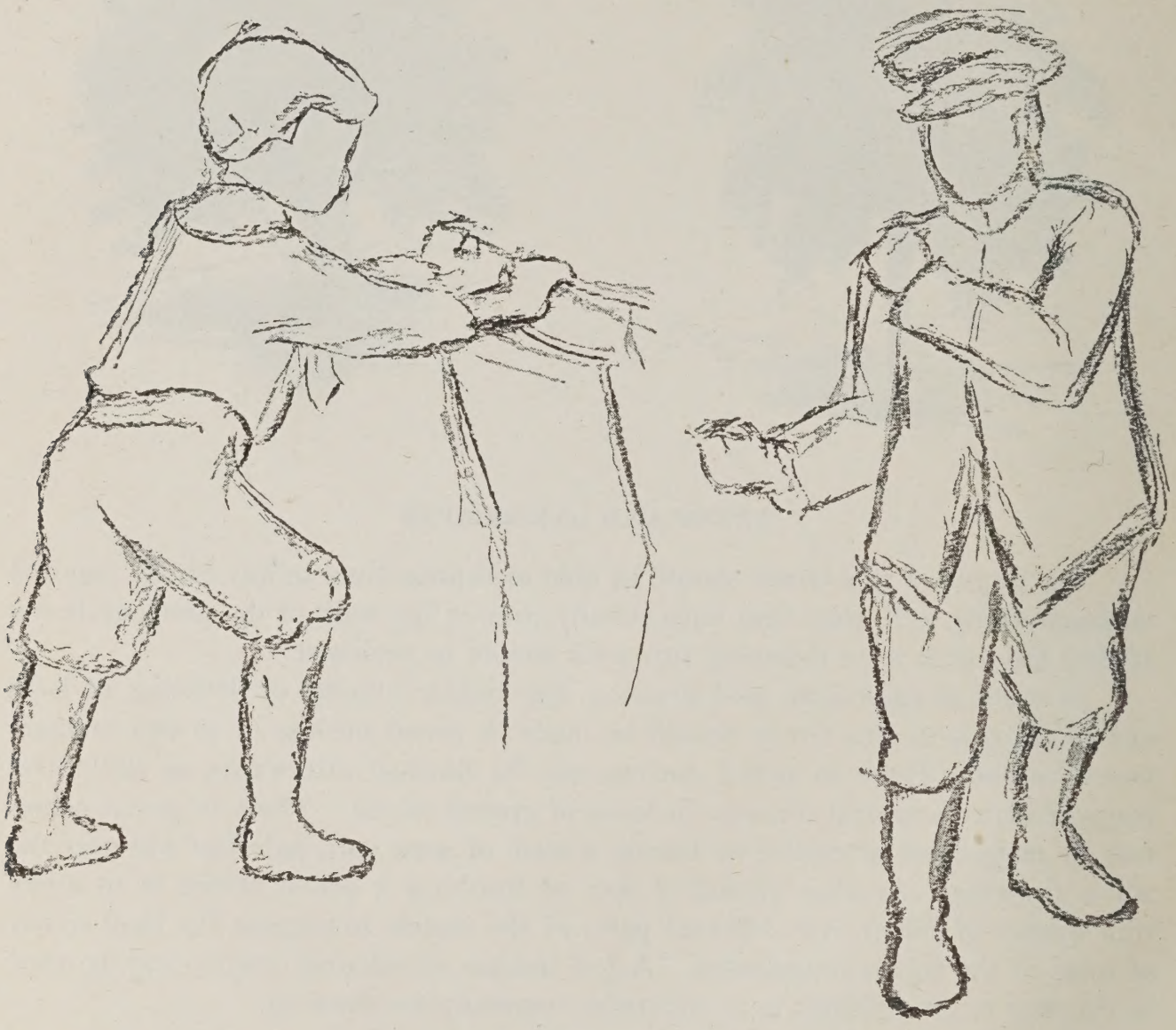
TREES AND LANDSCAPES

The pupils in this Grade should be able to express trees in any of the required mediums fairly well when they have already covered the work of the previous Form. If they are found to be deficient, this work should be reviewed.

In order to emphasize good drawing, the greater number of drawings of trees and landscapes in this Grade should be made in pencil outline or in two or more pencil values. Those in pencil outline may be finished afterwards, as decorative compositions, in neutral tones or in tones of grayed colour. Those in pencil values may be made more attractive by having a wash of some soft, pale tint put over the whole drawing. Another attractive way of finishing a pencil sketch is to apply thin washes of colour over different parts of the sketch, to suggest the local colour of some of the things represented. A few touches of coloured crayon may be used in this way to give interest to an otherwise commonplace drawing.

LANDSCAPES IN NEUTRAL VALUES

The lesson on "An Avenue of Trees" which is placed after the "Drawing of Manufactured Objects", because it culminates a series of lessons on foreshortening and convergence, should be of assistance in the composing of interesting landscapes.

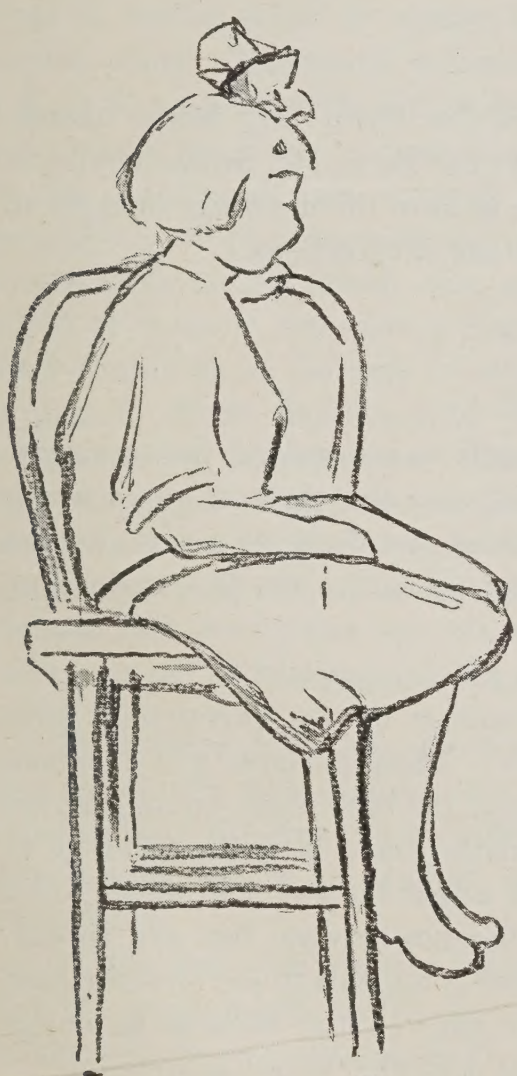


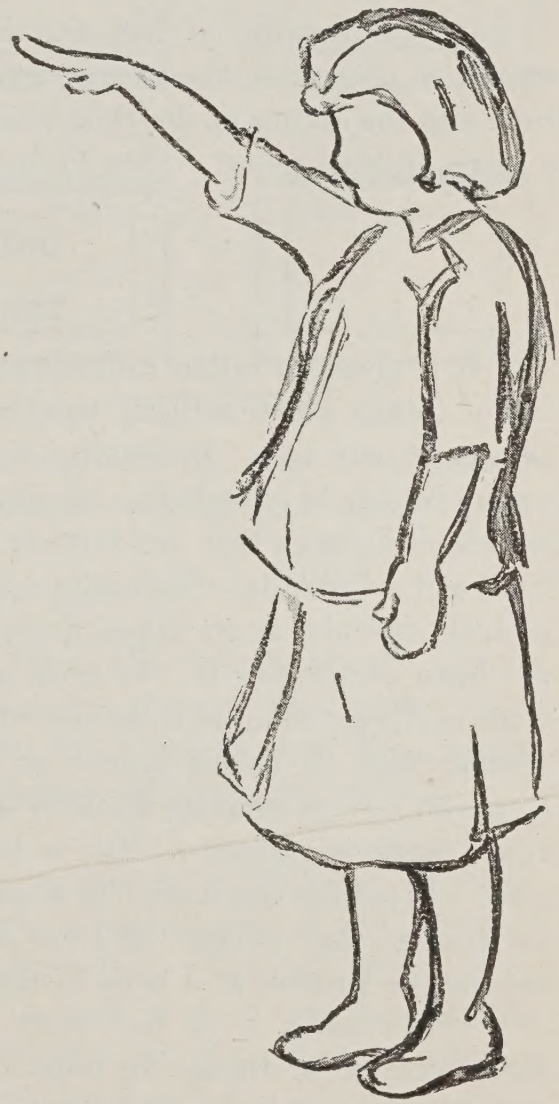
QUICK PENCIL SKETCHES

DRAWING FROM THE FIGURE

In Form IV, Junior Grade, a number of quick pencil sketches may be made in two or more lessons, from different members of the class posed in succession, each for two or three minutes, in various natural attitudes. A series of lessons in figure composition should follow, in which each pupil may make use of an outline

already made by him, or a new pose may be brought to a more finished point. In either case the figure must be of good size and well placed within a rectangle. A background should be added, related to the figure in such a way as to form a natural setting for it. A study of pictures, by good artists, in which the figure is given prominence, such as *The Sower* by Millet, will help the pupils in the placing of the figure. The figure compositions may be finished in any of the ways suggested under " Decorative Composition " in the text for this Form.





QUICK PENCIL SKETCHES

HEADS AND FACES

The drawing of heads and faces need not be carried further in this Grade than it was in Form III, Senior Grade, although greater accuracy in proportion and shape should be required. If a class shows special aptitude in sketching from the figure and has learned to block in the head and face with success, there is no reason why the teacher should not consult the text for Form IV, Senior Grade, for instructions on the placing of the features, in order to show the class how to place these in a very simple way in their most finished sketches from the figure.

FEET AND HANDS

In the drawing of feet and hands, the work for Form III, Senior Grade, should be continued, the teacher consulting the text for Form IV, Senior Grade, if time and the ability of the class render it desirable to have the drawings brought to a more finished point. (See Form III, Senior Grade illustrations.)

OBJECT DRAWING

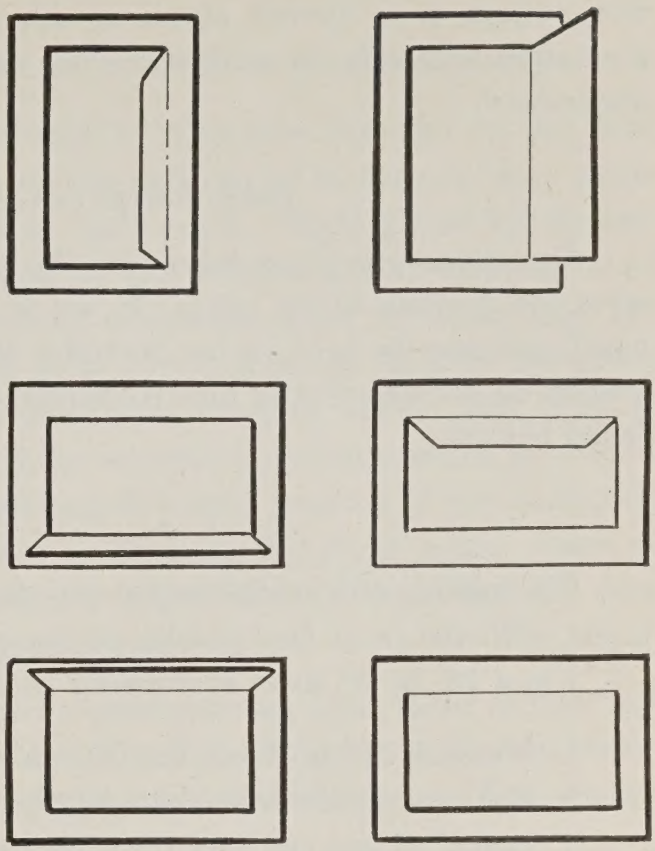
THE PICTURE PLANE

It is always a rather difficult matter to get pupils to understand the representing of things which actually have three dimensions, on a flat sheet of paper which admits of only two. In making a picture of anything, we draw on a surface (the paper) which is intended to be viewed in a vertical position. On this surface we represent surfaces that are vertical and parallel to the eye and others that extend from us horizontally. Naturally a vertical surface which is parallel to the eye gives us little trouble, as its appearance, except in the matter of size, corresponds with the facts concerning it. It looks as it actually is. Those surfaces which extend from us, however, appear narrower than they are, and the back edges are apparently shorter than the edges nearer us, so that the whole shape is quite different in appearance from what we know by experience is its actual shape. The viewing of a house through a window helps us to realize the difference between fact and appearance. If it were convenient to allow pupils who find it difficult to see foreshortened surfaces as they appear, to trace with a piece of soap on the window an object outside the window at a little distance from it, this difficulty would be overcome.

The window is in fact what artists call the *picture plane,* and in all our representation of things we must imagine a vertical sheet of glass in front of us and draw everything as it appears on this imaginary sheet of glass. All measure-

ments with the pencil to test apparent direction of edges and proportionate dimensions must be taken with the pencil held at arm's length and rotated on this imaginary glass against which it is held flat.

The accompanying illustrations show the use that may be made of a simple cardboard model, to help the class to realize what is meant by the picture plane. The model is made from a 6″ by 8″ piece of cardboard by drawing a rectangle one inch in from the edge of the cardboard, all around. This rectangle is cut on three sides and scored with a knife on the fourth side, so that it can be made to represent a door or a shelf according to the way in which it is placed. Each pupil should possess one of his own for reference. The foreshortening and convergence of the door or shelf of cardboard, as it is turned toward or from him, may be measured accurately by the pupil on the frame which remains vertical and parallel with his face.



PICTURE PLANE

DRAWING FROM MANUFACTURED OBJECTS

In drawing from manufactured objects in Form III, cylindrical and hemispherical objects were studied, and special attention was given to the foreshortened appearance of the circle in its different relations to the observer's eye. Rectangular objects were left to be studied in Form IV, because of the added difficulty of convergence.

In the first study of the cylinder, individual models were necessary, in order that the pupil might realize for himself the various appearances of the circle at different levels and distances. In the drawing, however, of cylindrical objects, only enough models were required to give each pupil a good view of one, because the cylinder, when vertical, may be viewed from any direction on the same level without apparent change. With a rectangular object the slightest variation in the direction

from which it is viewed alters its appearance, therefore individual models are absolutely necessary to successful class teaching, until the principles involved are understood.

FORESHORTENING AND CONVERGENCE

Directions are given below for the making of a rectangular model that will serve the purpose of the cube. It can be easily made in a minute or two by each pupil and may be kept in his portfolio for reference. The following sequence of lessons on foreshortening and convergence as seen in rectangular objects will be found helpful.

I

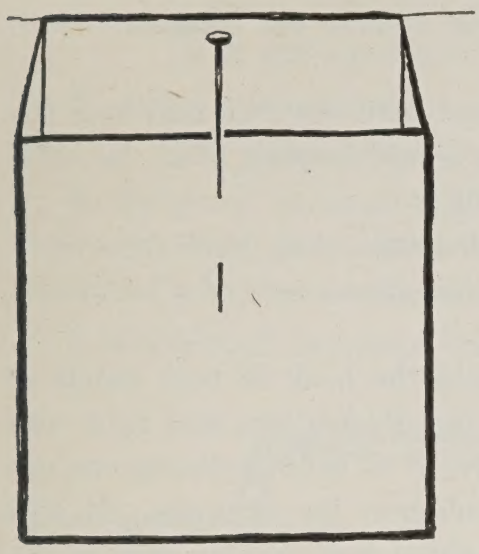
The making of a cubical model and the observation of its appearance at different levels, with the front face parallel to the eye.

Use a 12″ by 9″ sheet of drawing paper. Heavier paper is even better.

1. Measure $2\frac{3}{4}$″ up from the bottom edge of the paper at both ends.
2. Fold and crease well and separate the $2\frac{3}{4}$″ x 12″ strip.
3. Lap $\frac{3}{4}$″ of one end over the other and pin together so as to form a cylinder.
4. Flatten and crease so as to bring one crease near the lap.
5. Move the one crease over so that it comes exactly on top of the other and flatten and crease again.
6. Adjust the four creases so as to form the cubical model.
7. Place a second pin exactly in the middle of the top edge of the front face of the model, allowing it to project above the top edge some definite fraction of the height of the model, as $\frac{1}{4}$ or $\frac{1}{3}$ of the height.
8. Close one eye and raise and lower the model, holding it by the lower back edge with the left hand and keeping it perfectly level exactly in front of the eye. As it is raised and lowered, observe the changes in the apparent width of the space from the front to the back edge at the top.
9. Draw a pencil line along the inner corners at the back to emphasize them and raise and lower the model as before, noting where the lines of the back corners appear to touch the top edge of the front surface, thus showing the convergence of the sides.

II

Drawing of the cubical model with one of its faces parallel to the eye.



Pupils in alternate rows sit to the left or right of the desk, so as to leave a clear space in front of each pupil. Each places his model on the desk of the pupil in front, slipping a ruler or strip of cardboard under the front edge of the model so as to overcome the slant of the desk and make the model perfectly level. The front seats should be vacated or arrangements provided for the placing in proper position of the models made by those sitting in the front seats. Care must be taken to adjust the models so that the corners are perfectly true.

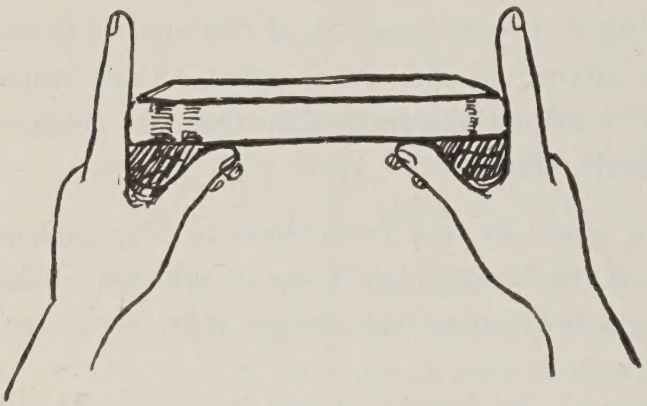
1. Draw the front face of the model a good size, say from three to four inches.
2. Note the position of the back edge of the foreshortened top in relation to the head of the pin and draw a light horizontal line, longer than necessary, to indicate this back edge.
3. Measure, at arm's length on the pencil, the height of the front face of the cube and compare the apparent width of the foreshortened top with this.
4. Correct, if necessary, the position of the horizontal edge already indicated.
5. Close one eye and observe carefully where the darkened vertical lines of the back corners seem to touch the top edge of the front and draw vertical lines from the upper horizontal line to these points.
6. Complete the drawing by joining the upper corners from front to back at each side.

III

Study of the appearance of a book held horizontally in front of the pupil with its back toward him.

1. Hold the book on the left hand and raise it till only the back is seen. Now raise the top cover of the book to a vertical position and observe that its shape is oblong and that the upper and lower edges are the same length and the sides are parallel.

2. Let the cover drop back to its former position where it can not be seen, and then lower the book a little so that a glimmer of the top is seen. The whole top is now visible, although it looks very much narrower than we know it to be. Slowly lower the book and observe the apparent width increase. Raise it and observe it lessen.
3. Bring the book close to the body and on a level with the chin and note the degree of foreshortening. Move it slowly away, keeping it at the same level, and note the seeming decrease in width.
4. Have the pupils express in their own words what they have discovered concerning the two conditions that affect the appearance of a horizontal surface.



5. Now hold the book in both hands as in the illustration, and raise and lower it as before, closing one eye to observe the changes. It will be noted that the far edge of the top, which we know to be of the same length as the near one, by no means appears so, as it does not nearly reach the limits of the two vertical fingers which the ends of the front edge are now touching. It will be observed also that two of the sides, which we know to be parallel, appear to slant toward one another. We are assisted in seeing this by comparing the apparent slant of the receding edge with the vertical lines made by the fingers, and also by observing the angle made by the vertical finger and the receding edge.

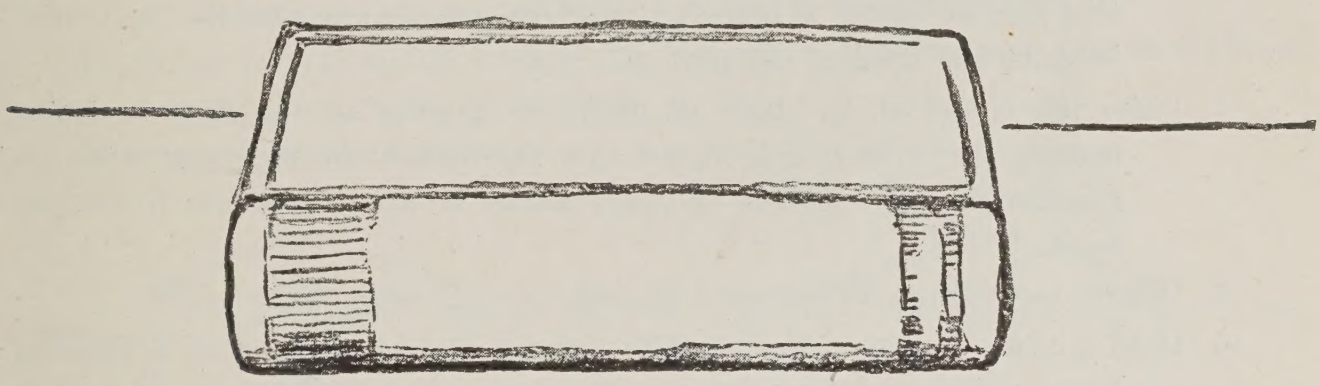
In this solid object we are aided in seeing convergence by two exterior angles in the front, while in our former lesson with the hollow model we were aided by the two interior angles at the back.

The book should be studied in this way at various heights before any drawing is done.

IV

The drawing of a book placed with its back toward the pupil on the desk ahead and straight in front of him. The book must be made level in the manner explained in the case of the cubical model.

1. Estimate the proportions of the back of the book and draw the back very lightly.
2. Take pencil measurements, comparing the thickness with the length of the back and correct, if necessary, the light sketch already made.
3. Judge the position of the back edge of the top in relation to its near edge and lightly place it.
4. By pencil measurement test the accuracy of this judgment, measuring the thickness of the book and comparing this dimension with the apparent width of the foreshortened top.
5. Correct, if necessary, the placing of the back line.



6. To help in the judgment of the convergence of the two sides and of the apparent length of the back edge of the book, hold two pencils vertically at arm's length, one at each end of the book and at right angles to the front edge, so that it appears to touch the end of the near edge of the top surface. Keeping the pencils perfectly vertical, close one eye and study the apparent slant of the receding edges when compared with the vertical lines of the pencils. Study also the angle at each end made by the vertical pencil and the receding edge. Draw the receding edges with very light lines.
7. Hold the drawing at arm's length and compare it with the model. If it does not agree with the model in appearance, take more careful pencil measurements and tests and correct where necessary.
8. Go over the drawing carefully, finishing it in accented outline, and add a table line.

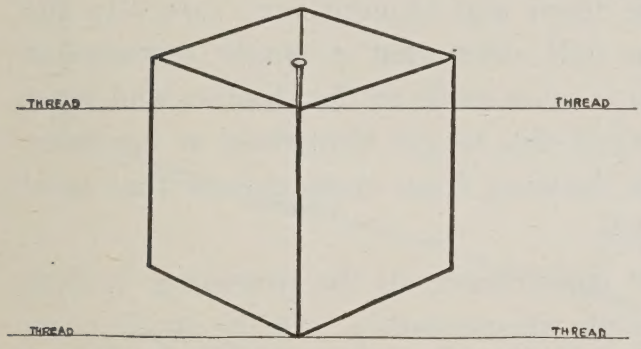
V

The study and drawing of the cubical model at an angle of forty-five degrees.

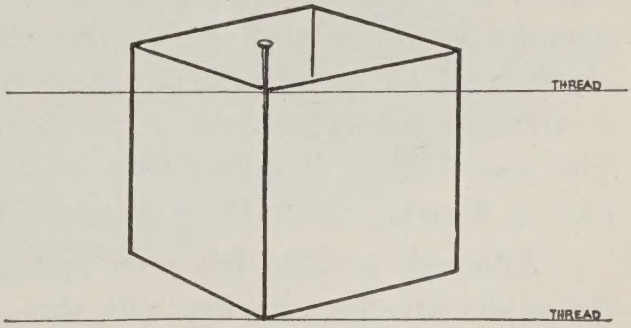
1. Take the pin from the front face of the model already made and insert it vertically in one of the corners, allowing it to project above the top a definite fraction of the height as before.
2. The pupil should now turn his model so that the corner with the pin is toward him and is also exactly in front of the back corner. The model should be held by the lower end of this back corner which is diagonally opposite the one with the pin.
3. Hold the model (*a*) so that the head of the pin covers the far corner, (*b*) so that the far corner is half-way down the pin, (*c*) so that the far corner is above the head of the pin, etc., etc.
4. Place the model at an angle of forty-five degrees on the desk in front, making sure that it is level and that the corners are true, and study its appearance. Note where the back corner is now, in relation to the pin head.
5. Draw a vertical line to represent the near upright edge of the model.
6. Hold a piece of thread horizontally between the hands in such a position that it seems to cover the top of the near upright edge of the model. The top edges of the two visible faces of the model will appear to form angles with this thread.
7. Draw at the top of the vertical line already drawn a very light horizontal line to represent the thread.
8. Hold the thread in position again and carefully study the angles. Do the lines of the model seem to lift very much off the thread at one end or are they close to it? How close?
9. Draw light lines of indefinite length from the top of the vertical line to represent these receding top edges.
10. Now hold the thread horizontally, so that it appears to touch the lower end of the front edge of the model, and study these angles in the same way. Are the angles made with the thread and the receding edges just the same, or greater, or less than those at the top?
11. Lightly sketch at the bottom of the vertical line in your drawing, the faint

horizontal line to represent the thread and also the lines to represent the lower edges of the two visible faces of the model.

12. Estimate where the far upright edges of these two front faces should be placed and draw with light lines.
13. By pencil measurement get the length of the near vertical edge, compare this dimension with the width of the sides (measured horizontally) and, if necessary, correct the placing of the vertical lines just drawn to represent the far upright edges.
14. Place the far corner of the top where it appears to be. Measure vertically on the pencil the distance from the front corner at the top to the back corner, compare this with the height of the front edge and, if necessary, correct the placing of the back corner in the drawing.
15. Draw the remaining lines of the top, also a light vertical line to represent the inner corner at the back.
16. Strengthen the outlines.



THE CUBICAL MODEL AT AN ANGLE OF 45°



THE CUBICAL MODEL AT AN ANGLE OTHER THAN 45°

VI

The study and drawing of the cubical model at an angle other than forty-five degrees.

Use the same model as in the last lesson and, holding it in a similar way, quickly review what has been learned concerning its appearance. Then, holding the model at any height determined upon, that is, the back corner even with the head of the pin, half-way up the pin, three-quarters of the way up the pin, etc., turn the model so that the far corner will be (*a*) to the right of the pin, (*b*) to the left of

the pin, (*c*) so that the pin is in the middle of the right face, (*d*) in the middle of the left face, etc.

Place the model on the desk in front as before, for drawing, and turned at an angle other than forty-five degrees. The steps taken in the drawing will be the same as in the last lesson. It will be found, however, that the side that is turned away more than the other appears more foreshortened, and the receding edges at the top and bottom make greater angles with the thread at that side than on the other.

In placing the far corner, the location of the place where the line of the back angle seems to touch one of the front faces will be a help. When drawing closed boxes or books in this position, the location of the back corner may be made very apparent by holding a thread vertically so as to cut through it.

The foregoing methods should be used in teaching the principles that underlie the drawing of rectangular objects. After these principles are well understood, interesting objects, such as baskets with handles, etc., etc., may be placed on boards across the aisles so that each pupil may have a good view of one. In studying the objects thus placed, the pupils should face them and observe very carefully the apparent slants of the edges. Observation will show that a single rectangular object of which two vertical faces can be seen is at an angle to the observer and must be drawn in that way, showing the near vertical edge longer than those at the sides. The same helps and tests should be used in drawing from these objects that were used in drawing the individual cubical models.

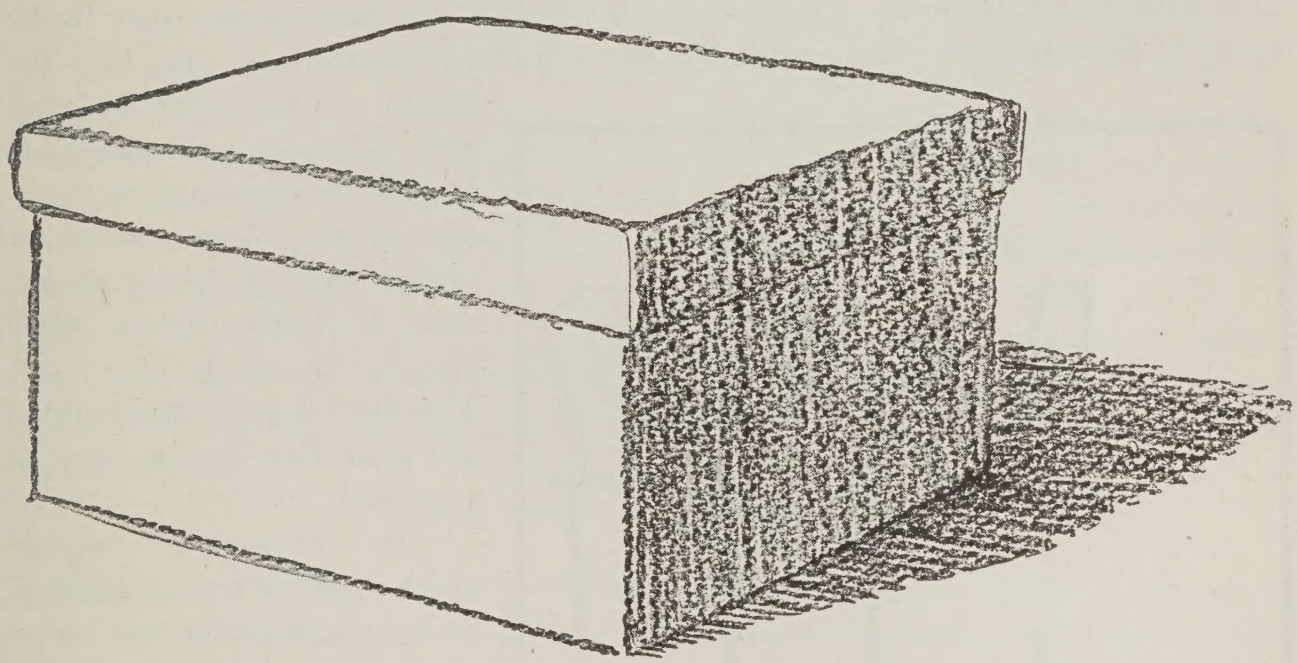
Although nothing has been said about convergence in the preceding lessons, the pupils have been dealing with this principle unconsciously. In the study of an "Avenue of Trees" which follows later, convergence is so apparent that the principle may be definitely taught.

LIGHT AND SHADE

No instructions concerning light and shade have so far been given, because it was deemed inadvisable to begin the study of light and shade in Form III with cylindrical objects which, although they are simple enough when drawn in outline, present subtle gradations in shading on account of rounded surfaces. With rectangular objects these difficulties are not encountered, and the first lesson in light and shade may begin with some simple rectangular object, such as a plain, white, cardboard box with dimensions anywhere from four to eight inches.

If the room can be arranged so that the light falls upon each box from one direction only, the boxes may be placed on the boards across the aisles with a sheet of white or light gray paper under each, so that the cast shadow may be definite. Each pupil may then proceed to sketch the box he sees best, as follows:

1. Making a very light sketchy outline of the box, of good size and well placed on the drawing paper.
2. Sitting well back in the seat, with eyes half closed, and studying the box to see which face is definitely in shadow.

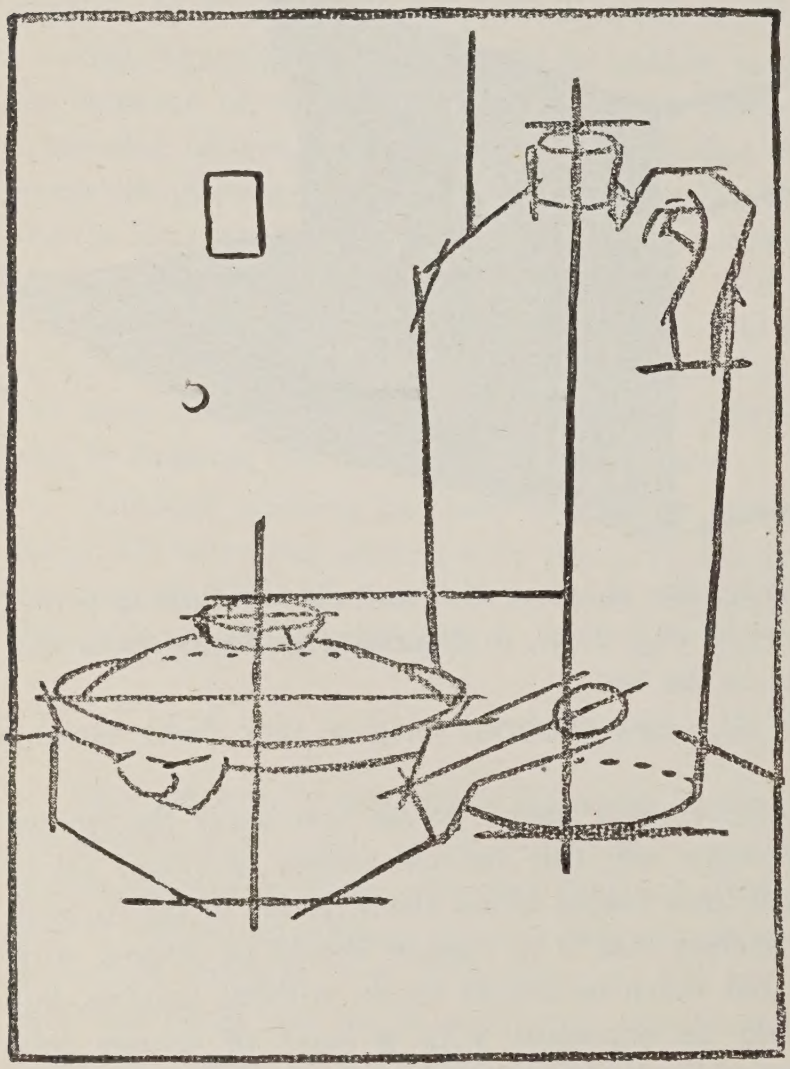


3. In the same manner studying the shape of the cast shadow, taking pencil measurements and straight edge tests, to determine its exact shape and proportions in relation to the box.
4. Blocking in the shape of the cast shadow, using a very faint sketchy outline.
5. Testing the pencil on another sheet of paper, to see how heavy the strokes must be to make the shade and cast shadow correct in value. It is advisable that the pencil lines should follow the direction of the surface, therefore the vertical surface that is in shadow should be covered with firm, vertical strokes that touch or almost touch, without lapping, but the cast shadow should be expressed with a layer of strokes laid horizontally, on account of the horizontal surface on which the box rests.

6. When these tones made up of pencil strokes have been placed in the drawing, the edges that are not defined by tones may be strengthened with a soft gray line.

There should be time in the same lesson to make another drawing, after having studied the model to observe that while only one surface is in direct shadow, only one is in direct light, and that the third visible surface represented in the drawing will require a pencil tone to express its true value.

In all sketches meaningless lines should be avoided; shade and cast shadow should be very definitely massed in with crisp pencil strokes that give the correct value without overlapping. The blocking in of the exact shape preparatory to the laying of the tone is necessary until one has acquired great skill, in order that the pencil strokes may be laid with firmness and precision. It must be remembered, however, that no cast shadow or surface that is shaded should show a visible outline other than the edge of the tone itself. A study of good illustrations will show how texture may be suggested.



BLOCKING IN A GROUP

In expressing objects which have a curved surface in light and shade, the shape of the cast shadow is quite definite, but the shade upon the object itself is less clearly defined; a lighter tone than that covering the part in direct shadow must come between it and the part in direct light.

Pupils in Form IV should be prepared to use objects with a curved surface, as well as those with a rectangular surface, in the making of groups.

As the lighting in very few school-rooms is satisfactory for drawing purposes, it becomes necessary to devise some means for shutting off reflected lights and providing for a more interesting lighting of the object, mainly from one side. A sheet of light gray cardboard about 12″ by 18″ may be scored and bent to form a shadow box to be placed behind the object in such a way as to cut off the light from some of the windows, or two 9″ by 12″ sheets of cardboard may be tied together to form a hinge and be placed behind the object in the same way. Sometimes a single sheet of cardboard will suffice, if it is placed in an upright position behind the object to be drawn.

If great difficulty is experienced in providing for an interesting lighting of objects, teachers are strongly advised to confine the efforts of Form IV pupils, in their pencil drawings of objects in school, to Accented Outline, or to Expressive Outline, which will permit a further suggestion of light and shade than the former.

It would be well, however, to explain the method of drawing in light and shade to the class and have the phenomenon, as seen out-of-doors and also under artificial light, carefully observed.

As the rays from a single lamp or other artificial light falling upon an object throw a definite shadow and also permit of the placing of the object so as to give an interesting lighting, the drawing of an object in light and shade makes a valuable home exercise.

AN AVENUE OF TREES

Before the average pupil has reached Form IV, Junior Grade, he has discovered that an object near him appears to be taller, wider, and more distinct than an object of the same size and kind seen in the distance. He has probably observed this more particularly in the appearance of trees and has noted that a tree near him is apparently very much taller than those in the distance.

In the avenue of trees shown here the person drawing it stood in the middle of the road, the two nearest trees towered far above his head, and those receding from him seemed to gradually diminish in size and in space apart, till all the receding lines seemed to meet at a point in the distance.

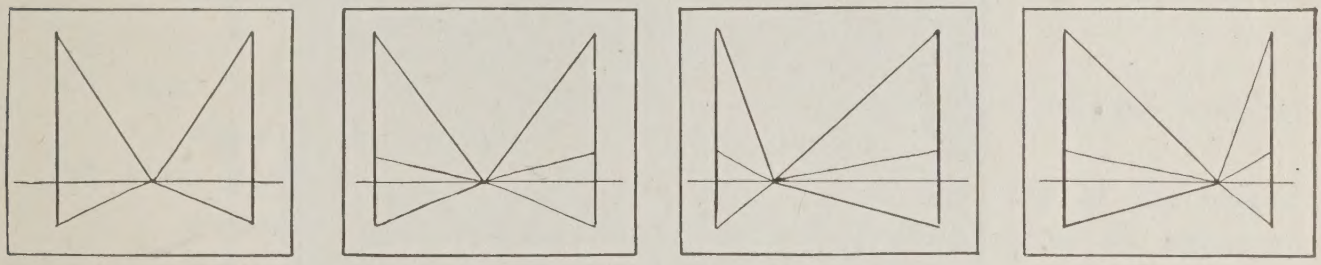
In locating this point in the drawing of a picture, it is necessary that the pupils have already ascertained, through frequent observation, that the sky appears to touch the earth in the distance, and that unless hills intervene this line where sky and earth appear to meet is always on a level with the eye of the observer. The eye of a person standing beside a tree of average height would not be high enough to come among the branches; its height from the ground would come somewhere

AN AVENUE OF TREES

on the trunk. A horizontal line drawn through this point locates the horizon line of any one of similar height standing on the same level and viewing it from the same direction.

The fault found in most drawings is that this point is placed entirely too high to represent the eye level of the pupil when he is standing on the ground. When the horizon appears above the heads of figures in a picture, it indicates that the observer viewed the landscape from an elevation.

If an unobstructed view of the apparent meeting of earth and sky can be obtained, the pupil can be led to discover that this line moves up or down with his eye according to whether he sits or stands or mounts an elevation. If he can see a tree a short distance in front of him, he will notice that the horizon line passes behind it exactly where the height of his eye would be if he stood against it. In placing the horizon line on the paper when drawing the avenue, these points must be remembered.



AN AVENUE OF TREES

Having ascertained that the point where all the lines seem to meet is opposite the observer and on the horizon line, it is easily seen that the skeleton lines in Figure 1 will mark the apparent position of the bases of the trees and of the general level of the tops.

A line to indicate the average height of the trunks must also be placed (Figure 2). In an avenue of trees the trunks are generally trimmed so as to be fairly uniform and of sufficient height not to allow the branches to interfere with the tops of passing vehicles or the umbrellas of pedestrians, therefore a line drawn from the top of the trunk of the near tree at either side to the point already located on the horizon will mark where the top of the trunk in each tree in the row would appear to come. When drawing the avenue, besides showing the diminishing in the apparent height, we must take into consideration the apparent diminishing in width of the trees and tree trunks and of the space between them as well; and the fact also that each tree

AVENUES OF TREES—BY FORM IV PUPILS

in the row, as it recedes, becomes less and less distinct and distinguishable from its neighbours.

All these points concerning the appearance must be gained through the pupil's own observation as must also the appearance of the receding edges of the sidewalks and roadway.

The following sequence of steps may be followed with advantage in having a class draw from memory an avenue of trees after the foregoing observations have been made:

1. Draw the nearest tree in each row in that part of the avenue that could be seen by a person looking down the avenue from the middle of the road.
2. Locate the horizon line behind the trunks.
3. Locate the point on the horizon line opposite the observer's eye.
4. To this point draw very light lines from the base, the top, and the top of the trunk of each of these trees.
5. Estimate the widths of the sidewalks and roadway.
6. Draw light lines to the central point on the horizon to indicate receding edges of road and sidewalks.
7. Draw light vertical lines to locate the trees in each row at the proper distances apart to represent the gradual diminishing of the apparent width between the trees as they recede.
8. Indicate the width of each trunk that could be seen separately, also the main limbs that would show.
9. Draw the parts of the tops that would show, remembering that the line formed by the tops against the sky would be irregular.
10. Strengthen, toward the front of the picture, the lines of the sidewalks and the irregular edges of the roadway.
11. Emphasize the nearer trees in such a way that those receding will grow gradually less distinct, leaving those in the distance scarcely distinguishable from their neighbours.

The pupils should also be led to notice that, if the observer is nearer one side of the avenue than the other, the point on the horizon line where the receding lines appear to meet will be nearer that side than the other. Figures 3 and 4 show the effect such a change in the position of the observer would have upon the receding lines.

PICTURE STUDY

THE AVENUE OF MIDDELHARNIS—HOBBEMA

THE ARTIST

Meindert Hobbema was born in 1638. He was the son of a soldier, and the pupil, and later, the friend and comrade of a noted Dutch landscape painter named Ruysdael. Beyond this we know very little of his life excepting that he spent the greater part of it in Amsterdam, where he died poor in 1700. Three places, of which Middelharnis is one, claim the honour of having been his birthplace.

We can tell something of Hobbema's character and disposition from his paintings. In the ordinary everyday landscapes that he painted he made no attempt to idealize them, but painted them as one who knew and loved the countryside. Unlike his friend Ruysdael, he never chose the lonely, the sad, or the storm-worn. His pictures are full of sunshine and suggest quiet happiness, and in them people and animals are shown occupied quite naturally with the ordinary affairs of life.

THE PICTURE

Having discussed the artist with the pupils in an informal way, the teacher should question them with regard to the picture, which they should have had an opportunity of studying some time previously. The position of the village, eighteen miles to the south-west of Rotterdam, should be located on the map. The occupation of the people, chiefly herring fishing, should be spoken of, and the various things concerning the locality that can be gleaned from the picture should be noted.

The original picture, which is in the National Gallery, London, England, is full of light, but does not show all the varied colouring of nature. The road, with its deep ruts made by the heavy carts that have passed over it, is yellowish-gray, and the dark green plumes of the poplars stand out against a blue sky that is flecked with little gray and white clouds.

Lafond in speaking of Hobbema says: "Whatever may be the subject he treats. he always remains the happy interpreter of the calm scenery of his own country of low and drowned horizons".

What is meant by "low and drowned horizons"? Is the term applicable to this picture? Note the hulls and masts of ships beyond the village and the village homes clustering around the tall church tower, in which a light is placed at night

to guide wanderers on sea and land. Does a church tower seem a fitting place for a beacon light? Why?

What is the title of the picture? Is it appropriate? Where has the artist placed the avenue? Why not exactly in the middle of the picture?

Let us stand in thought looking up the avenue toward the village and note the convergence of the receding lines of the trees and the height of the huntsman with his dog and gun as compared with the group of figures in the distance.

As we walk up the avenue in imagination, let us glance on either hand. We note the wide ditches filled with water. Why are they there? To the left is a grove of trees with a long, flat meadow behind it. On the right is a plot of ground that seems to be part of a nursery garden. It shows patient cultivation, and in it the gardener is pruning his shrubs. On the roadway that leads to the substantial farm buildings beyond, a man and woman have paused a moment to exchange greetings and possibly a word or two of good-natured gossip. It all seems very natural, although so different in many ways from the landscapes to which we are accustomed, and we feel that the man and woman who are chatting together will part presently and go on their several ways and that the pedestrians in the avenue must soon disappear in the distance.

The picture is full of details, and the horizontal lines are in sharp contrast with the conspicuously vertical lines of the poplars; but this lack of unity in the picture is largely overcome by its splendid perspective, by means of which the eye is drawn irresistibly back to the avenue from every part of the picture.

CHAPTER XV

COLOUR

Assuming that the Form IV, Junior Grade pupil has come up through the preceding Forms, there is very little that is new concerning colour that he is expected to learn. What he has already been taught should be systematized.

THE PROPERTIES OF COLOUR

The pupil in this Grade should be taught that colour has three properties—Hue, Value, and Intensity, or as the latter is sometimes called, Chroma. He has already become familiar with the two former properties—*hue*, the property which distinguishes one colour from another, and *value*, the position that a colour occupies in relation to black and white. He should now be taught that *intensity*, or *chroma*, is the position that a colour occupies in relation to full brightness, at which it is possessed of its greatest degree of hue, or to neutrality which exhibits the total absence of hue.

The Colour Circle, described in the Senior Grade of Form III and which shows the colours at full intensity, should be made early in September as a preparation for the Autumn work in colour. Greater accuracy of hue and value should be expected from the Form IV class than was required in the preceding one.

REDUCING THE INTENSITY OF COLOURS

When we gray colours by complementaries, we are reducing their intensity. A scale may be made showing the gradation of one colour to its complementary as follows:

SCALE FROM BLUE TO ORANGE THROUGH NEUTRAL GRAY

1. Draw five rectangles each one inch by two inches.
2. Make a small pool of clear strong blue and paint a wash of it in the first rectangle.
3. Make a small pool of clear strong orange and paint a wash of this in the fifth rectangle.
4. In the third rectangle paint a wash of the gray made by mixing equal quantities of the blue and orange.

5. In the second rectangle paint a wash made by mixing three parts of blue with one of orange.
6. In the fourth rectangle paint a wash made by mixing one part of blue with three of orange.

The first rectangle should show blue at full intensity. The fifth rectangle should show orange at full intensity. The second rectangle should show a dull blue, which might be called variously a grayed blue, a partly-neutralized blue, or a blue of low intensity. The fourth rectangle should show a dull orange, which might be called variously a grayed orange, a partly-neutralized orange, or an orange of low intensity. The middle rectangle should show a neutral gray, one that suggests neither blue nor orange.

Any pair of complementary colours may be handled in this way with similar results.

Although it has already been explained in the Junior Grade of Form III that colours used in Representation and Design should be grayed when necessary with their complementary colours, a scale from one colour to its complementary colour can hardly be called a scale of intensities. When we make a scale of values, the movement is vertical from light to dark, or dark to light. The movement in a scale of intensities should be horizontal from one colour to its corresponding value in the neutral scale. There should be no change in value shown in the different steps.

If we make an analysis of the scale given above, we find that the normal value of blue is High Dark and the normal value of orange is Low Light. Orange mixed with blue in equal quantities makes a gray lighter than blue, but darker than orange. The grayed blue, having less of orange than the neutral gray, would be darker than it but lighter than the blue; and the grayed orange, having less of blue than the neutral gray, would be lighter than it but darker than the orange; thus the scale from blue to orange would show gradations in value as well as intensity from one colour to the other.

SCALES OF INTENSITY

In order to give the class a conception of a scale showing different intensities of one colour, a plan similar to the one suggested for teaching values might be used.

Let the pupils imagine a heap of powder, standard red in colour, for example, at one end of a table in front of them, and a heap of gray powder of the same value

(that is High Dark in the case of red) at the other end of the table. One heap of powder would be red at full intensity, the other would be red at no intensity, that is, red with all hue taken from it and only its value or degree of darkness left.

The pupils should now imagine the teacher taking a portion of the red powder, mixing it thoroughly with an equal quantity of the gray powder, and placing it half-way between the two. The middle heap would be red at half intensity. The pupils should next imagine three parts of the red mixed with one of the gray and placed in position next the red. This heap of powder would be red at three-quarter intensity. The next step would be to have the class imagine three parts of gray mixed with one of the red and placed in position between the gray and the red at half intensity. The last heap made would be red at one-quarter intensity.

In order that the pupils may realize the difference between value and intensity, they should be required to make one or two scales in the following manner:

1. Draw five small rectangles in a horizontal row, as for the last exercise.
2. Make a wash of strong red in the depression at one end of the lid of the paint-box.
3. Put a wash of this red over the first rectangle.
4. Clean the brush and make a gray wash of the same value as the red, in the depression at the opposite end of the lid of the paint-box.
5. Put a wash of this gray over the fifth rectangle.
6. Mix equal quantities of the red and the gray and put a wash of this mixture over the middle rectangle.
7. Mix three parts of the red with one of the gray for the second rectangle.
8. Mix three parts of the gray with one of the red for the fourth rectangle.

When the washes are all in place the scale should show:

1st rectangle: Red at full intensity
2nd rectangle: Red at $\frac{3}{4}$ intensity
3rd rectangle: Red at $\frac{1}{2}$ intensity
4th rectangle: Red at $\frac{1}{4}$ intensity
5th rectangle: Red at no intensity.

No one of the rectangles should be lighter or darker than any of the others.

COLOUR HARMONY

The effect that very bright colours have upon the eye has already been spoken of in the Form III, Junior Grade text. Colours used in house furnishings and

clothing and for similar purposes should be softer than the standard colours at full intensity. When the tones of one or more colours that are to be used together are so related to each other that they continue to please the eye, we speak of the combination as producing harmony.

Tones of colour which are very unlike each other in hue, as orange and blue, require to be of lower intensity than those which are of the same hue.

COLOUR SCHEMES

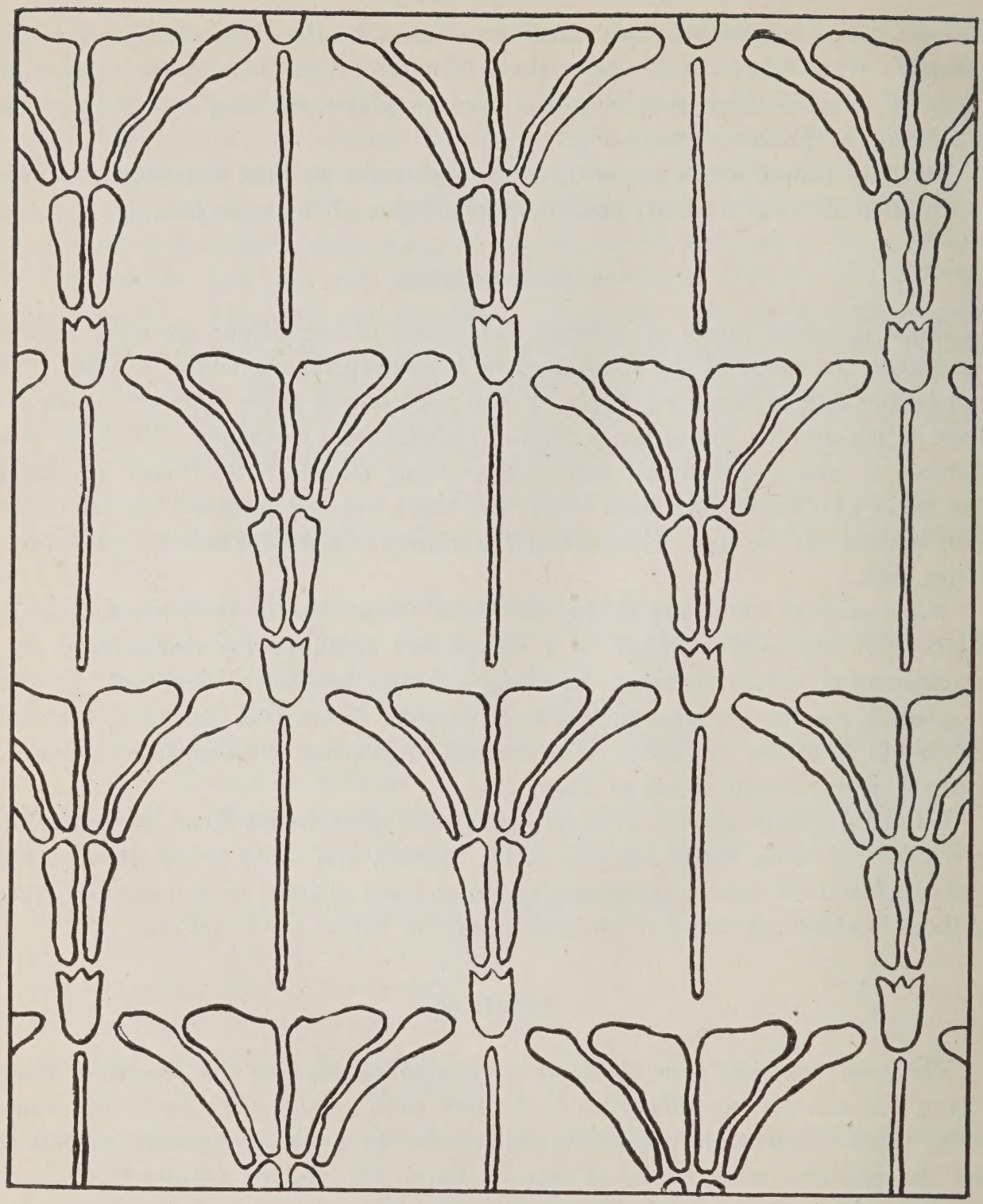
When different values or different intensities of one colour are used together in a design, we speak of the tones used as a Monochromatic colour scheme. The pupil in the Junior Grade of Form II who used one or more tints or shades of a colour in his designs was using a monochromatic colour scheme. As there is no difference in hue, the different values of a colour require little if any graying to make them harmonize with each other, but there are few purposes for which any colour scheme can be used where greater harmony is not produced by graying the colours used.

When colours which are at opposite ends of any one of the diameters in the colour circle are used together in a design, we speak of the combination as a Complementary colour scheme. In using a colour scheme of this sort, we have the greatest possible contrast in hue and, in order to produce harmony, the tones used should be of low intensity. The method of graying complementary colours is described in the Junior Grade of Form III.

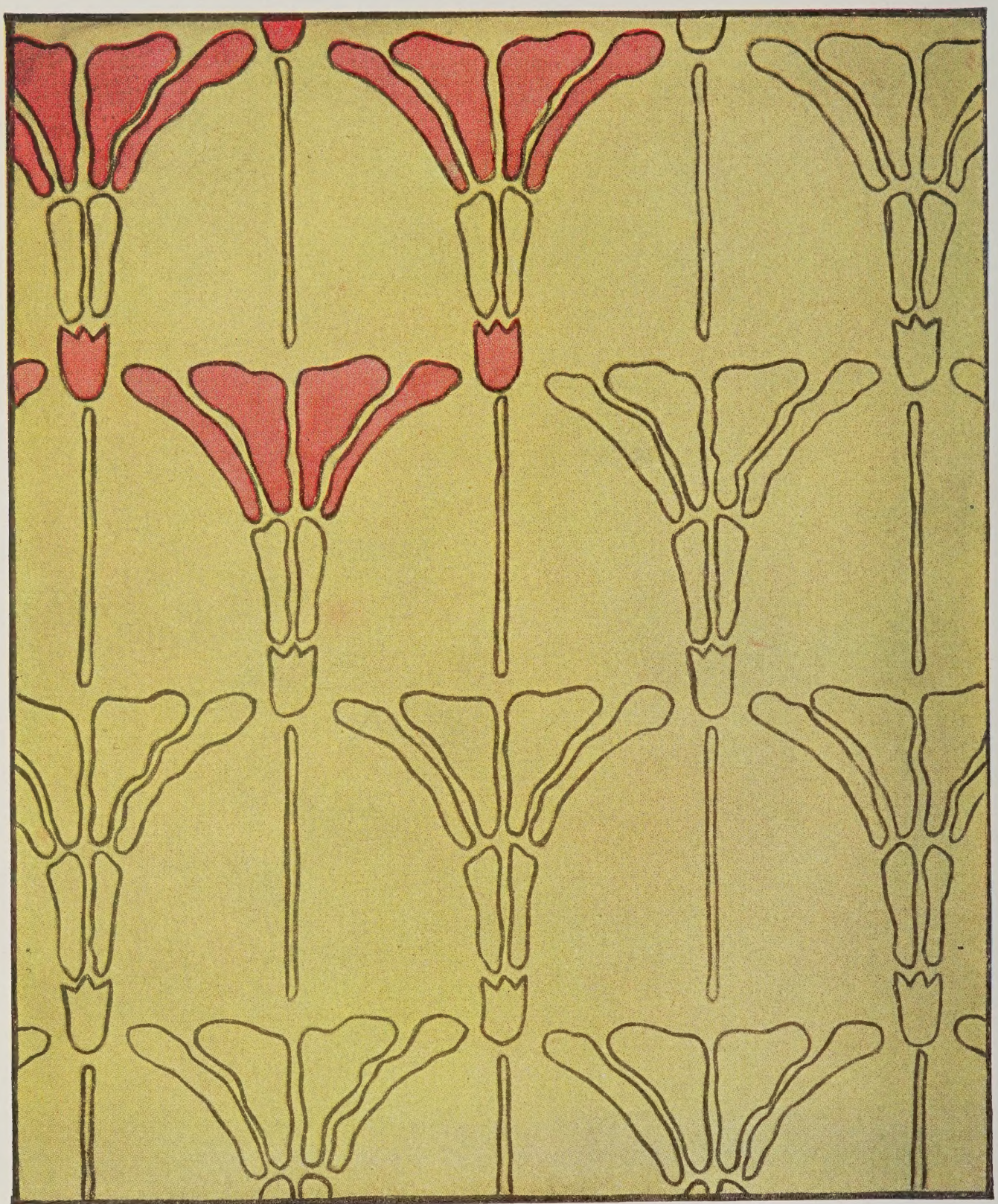
Beautiful colour schemes of low intensity are often found in moths, butterflies, the feathers of birds, fungi, mosses, shells, pebbles, and other things from nature. Pupils in Form IV should be allowed to match some of these combinations, arranging them in order according to hue and value, for future use in design.

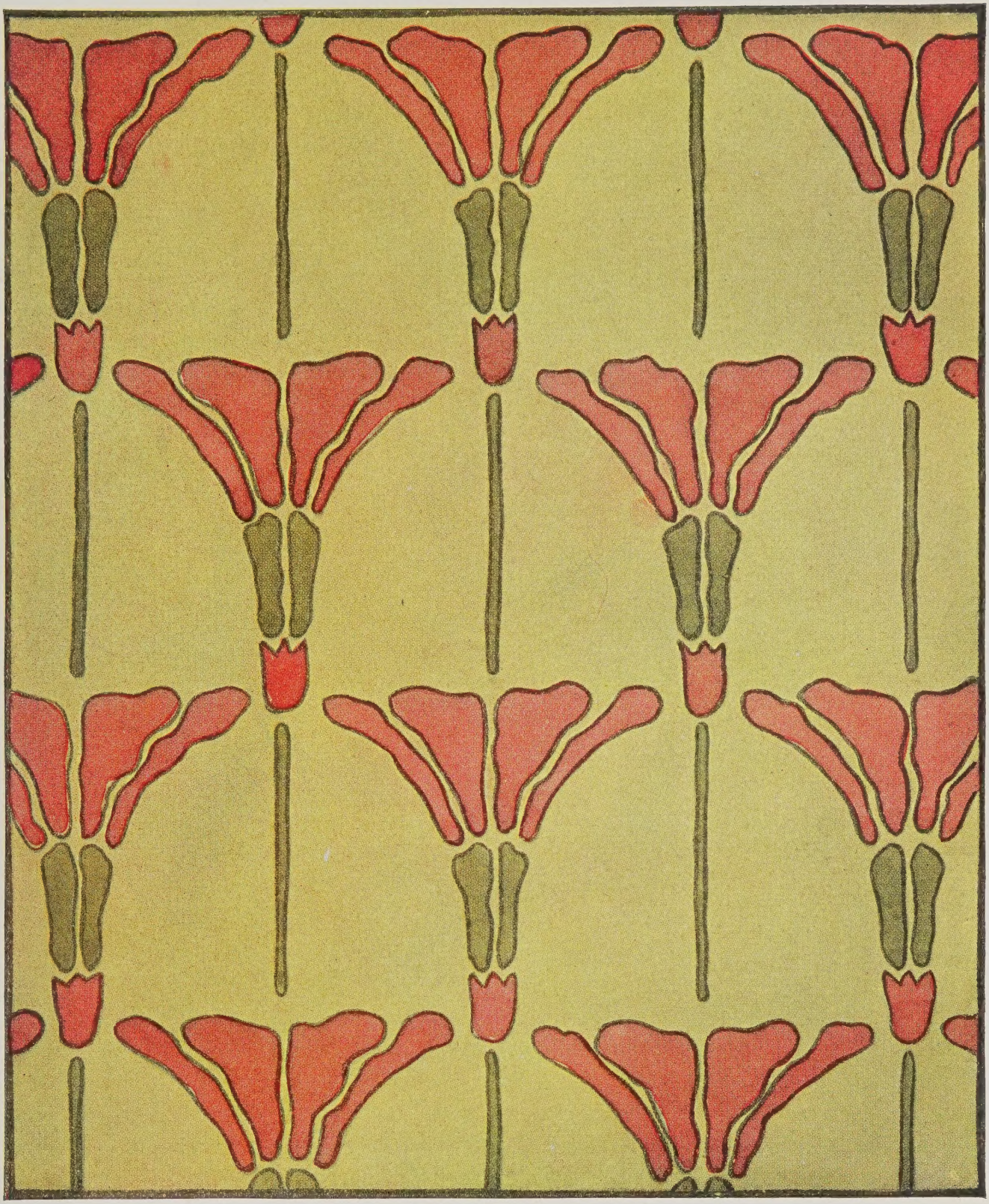
DESIGN

The pupil who has done the work in Design assigned to the preceding Forms will not find any serious difficulties in the new work arranged for Form IV, Junior Grade. Two constructive plans that are new to the pupil are introduced, but the chief development must be, as it was in Form III, Senior Grade, through the designing of the single unit. There must also be a clearer understanding and a more intelligent use of Balance, Rhythm, and Harmony. These three principles are so interrelated that it is sometimes difficult to distinguish them. Balance and



AN ALL-OVER PATTERN READY FOR THE BACKGROUND WASH





Rhythm might both be present in a design which was lacking in Harmony, yet without both Balance and Rhythm perfect Harmony is impossible.

It is essential in making a design for any particular purpose, that we consider first the purpose, and then decide from that standpoint the position, size, shape, and colour the design is to have. To do this we must realize that every mark or spot that is placed upon the surface of anything has a certain power of attraction due to each of the following—position, size, shape, value, and colour. These attributes of a design must be so manipulated as to bring about a balance of attractions that will result in a harmonious whole. Thus, if a shape is small, its power of attraction may be increased by colour. A small shape that is brilliant in colour will balance a much larger shape that is dull in colour. The larger the shape is the less intense should be its colouring.

POSITION

The design prepared for a given surface may be good in itself from every standpoint, yet may be so placed on the surface of an article that the balance is destroyed. When a single unit is to be placed upon a plain surface which is to be viewed vertically, it may be placed usually, with good effect, slightly above the middle on the vertical axis of the surface. When the surface is to be viewed horizontally, as in the case of a rug or a ceiling, the unit looks better as a rule when placed exactly in the middle. It is seldom, however, that the designer has the placing of only one thing to consider. The method of approaching the subject, when more than one shape has to be considered in relation to the surface to be decorated, has been given in connection with Applied Design in the previous Forms. In almost every case, the first step should be the planning of a proportionate margin to regulate the amount of space that is to be kept quiet, that is, unbroken by ornament. In such problems in Applied Design as book covers and title-pages, a single decorative unit is often used as a balance point between two separate lines or masses of lettering. Balance may be secured by having both letter spaces of the same size with letters of equal weight, but the balance would be too obvious. The eye delights in a more subtle balancing of attractions, one that can be felt rather than seen. The lettering at the bottom, being of less importance than the title, may be made of smaller type, and balance may be secured by moving this smaller lettering down so that the distance between it and the decorative unit which marks the balance point is greater than the distance between the balance point and the larger mass of lettering in the title. Every boy or girl who has balanced a larger or smaller child on a see-saw knows that the one of lighter

weight requires the longer end of the board and that two children of unequal weight must adjust their position on the board in relation to the central support, before they can bring about the desired balance. The principle on the book cover is the same.

SIZE

The decorative mass or masses may be so large or so small in relation to the surface decorated, or to each other, that both Balance and Harmony are lacking. The designer must exercise great care and thought in discovering the exact proportions in the spacing which will be in best relation to the size of the surface.

SHAPE

Discordant shapes are perhaps easier to avoid than disproportionate or uninteresting sizes. No other shape looks as well within a square as a smaller square that is of proportionate size. The greater the difference in the shapes, the greater is the discordance or lack of Harmony. There must be some element in common to bring about a harmonious relation of shapes. A rectangular surface should have the outer boundaries of shapes that come near its sides or ends parallel with these edges for at least a part of their length. The boundary lines of one shape should conform, or flow in unison, with the nearest boundary line of adjacent shapes. Monotony must be avoided, but when variety is purchased at the expense of unity the price is too great. The beauty of simple, dignified shapes and their superiority over those that are fussy or elaborate has been emphasized in the preceding Forms.

The second step in the decorating of the type of surface under consideration would be the determining of the shape of these decorative masses. Size and position will have been determined already, in part at least, by the marginal line.

The third step would be the breaking up of these masses into agreeably related parts. Lettering should be planned in the same way as other decorative units. Letters that occupy a space well, are of good weight, and rhythmically related to each other, are exceedingly decorative.

VALUE

In the definition of Harmony given in the Introduction, the necessity for having a design fitted to the purpose for which it is intended was affirmed. Nowhere is this necessity more noticeable than in the colour values that are used. If the values for a repeating unit on a wall-paper were chosen from the same

standpoint as those for the lettering on a book cover, the pattern would so clamour for attention that it would be next to impossible to think of anything else in its presence. In like manner, the book cover design worked out in values suitable for a wall-paper would result in a book whose title was all but illegible. The one problem requires close values that will result in a quiet, unassuming background, the other demands a striking difference in values that will draw the eye unhesitatingly to the point where the required information is legibly as well as attractively displayed. The purpose for which the article decorated is to be used must govern the choice of values for the working out of the design. In the colour work for Form III, the pupils were taught to balance values and to make graduated scales of values. The knowledge gained there should assist them in producing a desirable balance and a rhythmic relation of the values used in working out their problems in Applied Design.

COLOUR

What has been said with regard to the values used in a design applies with almost equal force to the colours used. The colour intensity chosen, if Harmony is to be achieved, must depend largely on the purpose for which the design is intended and also, as has already been intimated, upon the quantity of it that is to be used. Rhythm may be brought about by regular gradations of value, hue, or intensity. Balance may be established by giving prominence in colour to shapes that are subordinate in size. The colour work for this and the preceding Forms should put the pupil in a position to choose and apply a colour scheme that will exhibit Harmony.

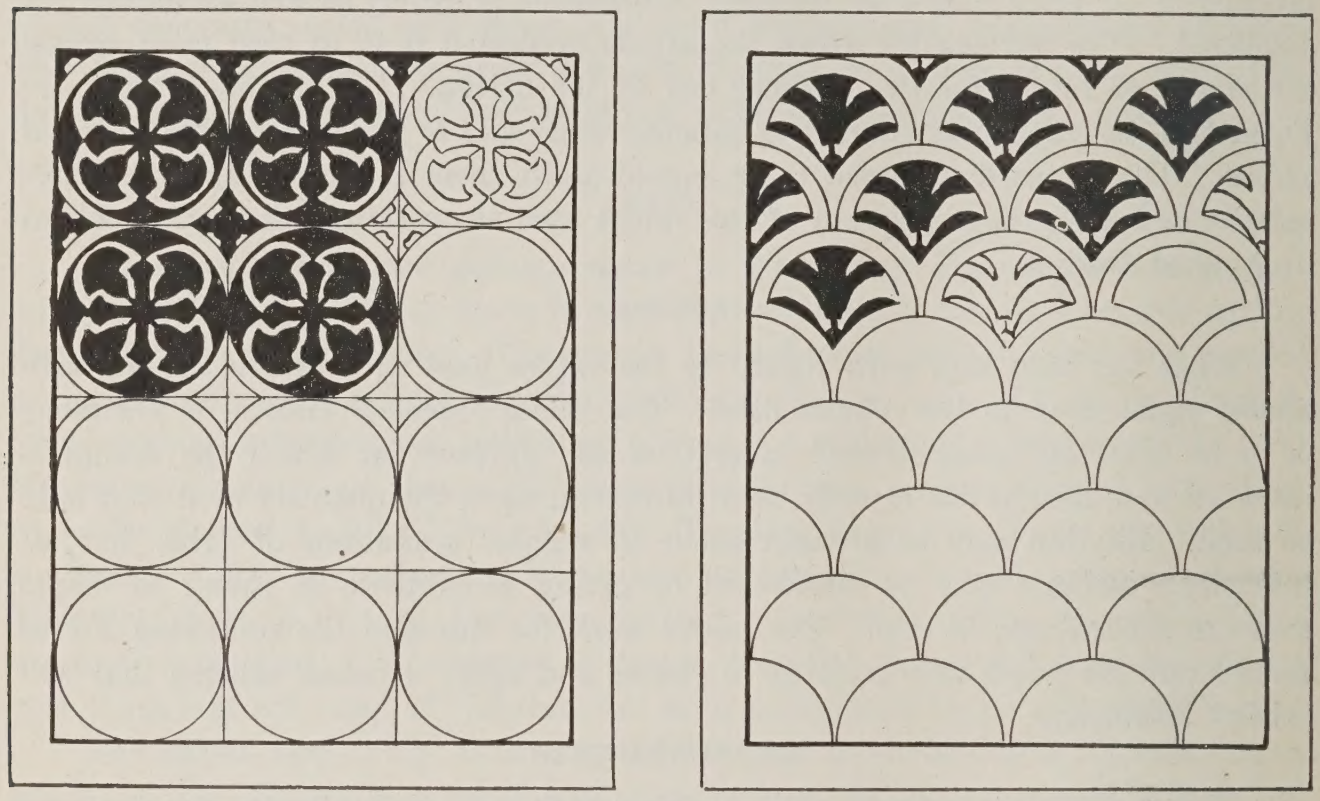
MEASUREMENTS

The measurements to be used in Form IV are practically the same as for Form III, Senior Grade. They must depend on the nature of the problem that is being undertaken and may be determined by the individual pupil or by the class after a discussion of the question, or may be dictated by the teacher if occasion renders it expedient. All measurements should be very accurate, and all construction lines should be drawn lightly with a well-sharpened pencil. A medium pencil, such as H B, is the best for the purpose. The regular drawing pencil should not be used in Design.

CONSTRUCTIVE PLANS

The constructive plans used for the repetition of units in all-over patterns may be made of oblongs, drop oblongs, diamonds, circles, and semicircles. All excepting the latter two should be familiar to the pupil. For both circles and semicircles,

compasses should be used. If a constructive plan of squares be drawn first, each circle may be described with its centre at the point where four squares meet, its radius being the side of a square. In this way the two diameters are in place as constructive lines upon which the unit may be designed, or as a help in placing other necessary constructive lines. The circles are easily kept in uniform rows also by this means. The small background opening made by every four adjacent circles



CONSTRUCTIVE PLANS

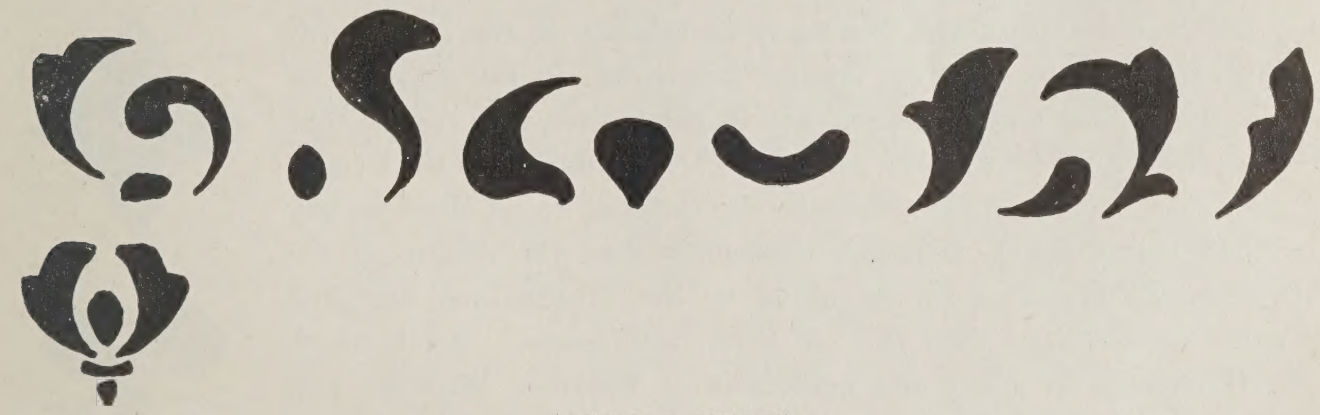
gives an opportunity for alternation in the designing of a second unit that will occupy this space in such a way as to add to the beauty of the pattern.

The groundwork of squares is an assistance also in drawing a constructive plan of semicircles. These are arranged alternately, forming a net-work that is sometimes called the fish-scale pattern because of its resemblance to the overlapping scales of a fish. Some of the most attractive patterns for brocaded silks and velvets are made on a constructive plan of semicircles.

UNITS OF DESIGN

Although Form IV, Junior Grade pupils are expected to be able to adapt geometric shapes and units of design derived from nature to the different con-

structive plans specified in the Detailed Course of Study, the special work in Design apportioned to this class is the making of units from abstract shapes. It would be too much to expect these pupils to create for themselves the elements of which these designs are to be composed. The teacher should draw them on the black-board or have sheets of paper on which a few shapes that can be seen distinctly from any part of the room are displayed. For the sake of the teacher who feels himself lacking in the inventive power necessary to the drawing of suitable abstract shapes, it is suggested that enlarged punctuation marks be used. The period, comma, dash, bracket, the upper part of the exclamation mark, and the point of interrogation, with variations of these, will provide satisfactory elements for the work of the term in designing from the abstract. It is not intended, however, that the more inventive teacher should confine himself to these. Care should be taken to give the class abstract elements that can be made to conform to each other so as to produce a unit that will possess cohesion and unity. A mere agglomeration of unrelated shapes cannot be considered a unit.



ABSTRACT SHAPES

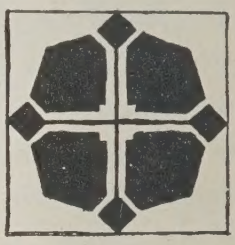
To be satisfactory, the parts of the unit should be balanced on either side of a central axis or should radiate from a central point, or shape.

A related movement that carries the eye from one part or line to another through all the parts, must also be evident. The eyes must not be dragged abruptly in contrary directions. A unit might be perfectly balanced and yet unsatisfactory, because it was lacking in this rhythmic quality.

The boundary lines of each shape must also conform to the boundary lines of adjacent shapes. The separate parts need not touch, but they must be sufficiently close to appear to belong together.

It will be observed that the three great principles of Design which had to be obeyed in the placing of decorative masses on a given surface are equally important in the constructing of the single unit. The illustrations on this page show units made from abstract shapes by boys in Form IV, Junior Grade.

The following is a fascinating way of producing an abstract unit. Fold a piece of paper and crease it. Open it and put a small spot or two of ink on the crease or near it, then refold it and press with the finger from the fold, moving the finger about with a circular motion. A little practice will enable the pupils to produce in this way a curiously-balanced spot which may be used in Design to good purpose, after it has been shorn of all uninteresting details and has been modified so as to exhibit Rhythm and Harmony.



UNITS DESIGNED FROM ABSTRACT SHAPES—BY FORM IV PUPILS

THE PRINCIPLES OF DESIGN RELATED TO LIFE PROBLEMS

In the pages that immediately precede, we have been considering Balance, Rhythm, and Harmony in relation to the single unit and to problems in Applied Design that come up for solution by the pupils. The teacher should try to get the class to realize that the application of these three principles is not limited to work to be done in school, nor is the power to use them of value alone to any particular profession, although experience and the nature of his work should always give the artist or the professional designer greater or more palpable skill in their application. All through life the power to apply the principles of Balance, Rhythm, and Harmony to the common everyday problems that meet us will be found of inestimable value. The friendly letter and the formal invitation, as well as the business advertisement, will be vastly more attractive to the eye for having been planned according to these principles. The table that is set in an orderly way is more inviting than the one on which the dishes have been placed at random without an apparent relation to each other or to the effect as a whole. The room that is arranged according to a definite, harmonious plan is likely to be more charming and restful than one which may be more richly furnished, if in the latter the articles have been purchased individually without any thought of how they

would look together in the room for which they were intended or whether they were at all suitable for the purpose.

A good deal that has been said in the preceding Forms concerning wall-papers is applicable to other house furnishings, such as hangings. It might be added here, that colours into which red and yellow enter largely are warm colours, that is, their appearance gives a sensation of warmth. For this reason the wall coverings and hangings in a room which has little or no sunlight, as one that looks to the north, should be in some tint or shade of one of the oranges. The deep creams and browns, and the pinks and dull reds that verge on orange are all suitable in hue for such a room. A room looking to the south should be furnished in the cooler colours into the making of which blue enters.

A very low-ceilinged room can be made to appear higher by having a striped wall covering or one in which the movement is distinctly vertical. The wall space in such a room should not be broken by a border, and the moulding should be placed at the top, close to the ceiling. On the other hand, a room with a very high ceiling may be improved in appearance by having the wall spaces broken horizontally by such devices as drop-ceilings, borders, mouldings, panellings, or wainscots, etc. To produce a pleasing effect, these horizontal divisions must be arranged just as the margins and other space divisions were planned in school problems in Design, so as to bring about well balanced spaces that are noticeably different without being disproportionate.

A knowledge of the principles of Design should be of great assistance also to the individual who wishes to dress tastefully. In a costume or suit, long unbroken lines tending to the vertical will increase the apparent height and lessen the width of the figure. Lines tending to the horizontal have an opposite effect. Excepting when the figure is unusually tall and thin, conspicuous horizontal divisions are likely to detract from, rather than improve, the appearance. The individual should be of more importance than the clothing, therefore to be in good taste the colours chosen for garments may rarely be of full intensity. The lighter tints require less graying than those which are near the normal value of the colour used. Tones of colour that are quite brilliant may be used with good effect in very small areas, such as pipings, or a knot at the throat, with a costume or suit that is of low intensity.

In our treatment of others these laws have a place. Balance demands that the rights of each individual in the home or the community be respected. Rhythm teaches the necessity for bearing and forbearing, and true Harmony is impossible

without an unselfish consideration of others that brings about unity without sacrificing individuality.

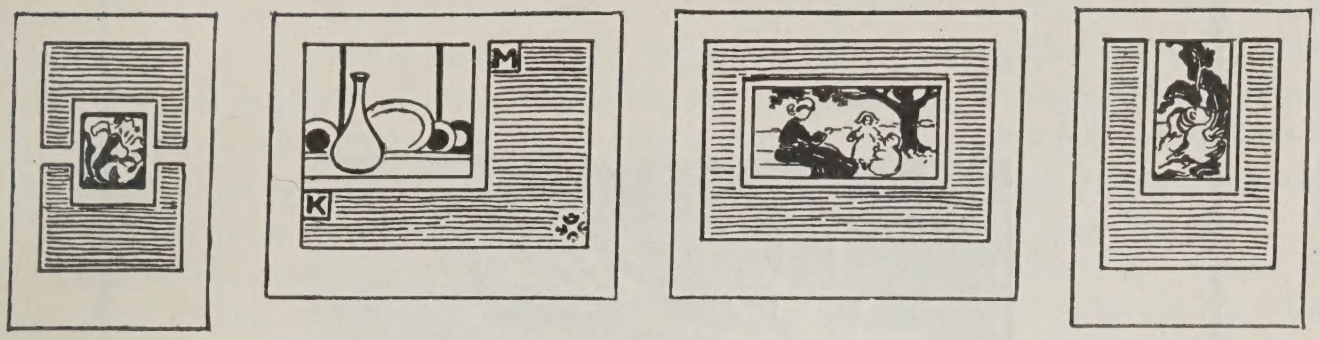
APPLIED DESIGN

If it can be so contrived, the special work that is being done in each class should find expression in some problem in Applied Design. The decorative compositions which have been taken up in connection with Representation are particularly adapted for use with good lettering in the making of school posters. These posters may be made by the pupils to advertise school concerts, lectures, fairs, exhibitions, or any form of entertainment given under the auspices of the school, or any public celebration in which every pupil is interested.

POSTERS

For the ordinary school poster, the regular 9″ by 12″ sheet of drawing paper will suffice. For special purposes, sheets of stiff paper or Bristol-board 12″ by 18″ or larger may be obtained.

A poster is intended to catch the eye, therefore a white or very light paper is best for the purpose. The colours used in working out the poster should be striking, but should not present inharmonious combinations. One colour and black, or one colour and middle-gray and black will give sufficient richness and sparkle to the poster. The use of a wider range of colours is likely to produce less satisfactory results. The crude red, yellow, or blue of the paint-box should not be used without first being modified; but any green tone, from a strong yellow-green to one that is nearer blue than green, and any of the oranges, from yellow-orange to a brilliant scarlet or a bright brown, are exceedingly attractive when used beside black or black and gray. Black waterproof India ink is better than paint for posters that are to be used out-of-doors, but black water-colour will give a velvety black if the wash is thick enough.



DIFFERENT ARRANGEMENTS FOR POSTERS

To make the poster proceed as follows:

1. Decide what information is to go on it, and express it in a terse, striking way.
2. Choose, from the decorative compositions made during the year, the one most appropriate for the poster.
3. Decide whether the lettering or the picture is to occupy the greater space.
4. Plan for a good margin and draw the marginal line.
5. Break up the area inclosed by the marginal line into two or more spaces for picture and lettering. The illustrations suggest different arrangements.
6. Draw the picture in pencil outline and plan the lettering in pencil. The lettering should occupy the space prepared for it and should at the same time be large and legible.
7. Decide upon the colour scheme to be used and prepare a sufficient quantity of the colours required for the poster. Before using the colours prepared, test them to see that they are strong enough.
8. Apply the prepared colours to the poster, after having studied it to see how they may be arranged best.
9. When the colours are dry, outline with black any parts that seem to require it.

STENCILLING

The unit of design made from abstract shapes can be made into a good stencil pattern with so little difficulty that pupils in Form IV, Junior Grade, should be taught how to make and use a simple stencil pattern. Many opportunities for its use may come up in the school-room or in the pupils' homes and, on that account, further instructions will be given in Form IV, Senior Grade. It would be unwise

AN ARRANGEMENT THAT MAY BE ADAPTED TO A POSTER, A LETTERED MOTTO, OR A MAGAZINE PAGE

to undertake any elaborate stencilling in school, no matter how great the temptation might be. The stencils made by the pupils in this Form might be used in the repetition of borders and surface patterns on the ordinary drawing paper, in which case water-colours would be applied with a brush that had been first filled with a wash of the desired colour and then pressed out till it was almost dry before being used. The pattern should be cut from smooth, rather heavy, manilla paper. A stencil design should consist of parts that are separate, yet so placed in relation to each other that they give the impression of being connected. The shapes that form the design are cut out and, when the stencil thus made is laid flat or if necessary pinned in place over the surface to be stencilled, the colour is brushed back and forth over the openings that form the pattern. If the stencil is cut down to fit the single geometric shape which is repeated to form the constructive plan, there will be no difficulty in repeating the stencilled unit regularly and accurately.

Instead of the colour being painted through the stencil with a brush, the pattern may be drawn in outline with pencil, and the colour applied to the shapes after the stencil has been removed. The method of repeating the unit by means of a stencil is sometimes employed on cloth, and in that case oil colours that have been thinned with turpentine may be used for colouring the shapes.

OPTIONAL PROBLEMS IN APPLIED DESIGN

CLIPPING-CASE NO. 1

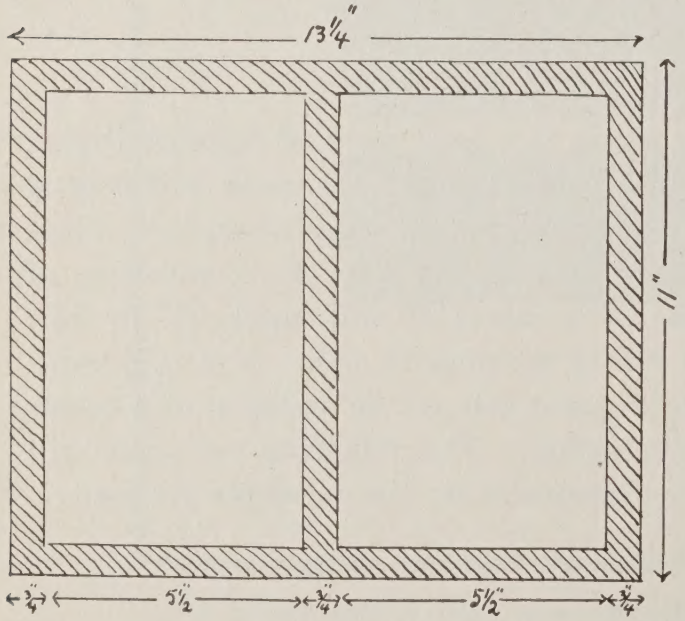
The making of a clipping-case is suggested as a good piece of Applied Design for pupils in Form IV, Junior Grade. The proportions of the cover will depend on the size of the envelopes to be used for the clippings. A machine-made envelope which is 4″ by $8\frac{7}{8}$″ can be purchased in packages. From four to six envelopes of this size will make a useful clipping-case. Two pieces of mill-board, $4\frac{1}{4}$″ by $9\frac{1}{2}$″, will be necessary for the cover when this size of envelope is used. The mill-board may be covered with any smooth, thin fabric, preferably cotton or linen, of a colour that is rather light in value but of low intensity. The following materials will be required for a clipping-case if the above dimensions for the envelopes are used:

Two pieces of mill-board, each $4\frac{1}{4}$″ x $9\frac{1}{2}$″
Two pieces of cover cloth, each $5\frac{1}{2}$″ x $10\frac{3}{4}$″
Two pieces of lining paper suitably tinted, or having an appropriate surface pattern, each 4″ x $9\frac{1}{4}$″

A suitable design for the cover
A piece of carbon paper for tracing the design upon the cover
From four to six envelopes that open at the side, each 4″ x $8\frac{7}{8}$″
One yard of silk cord, soutache braid, or narrow ribbon for lacing the parts of the clipping-case together.

See the instructions under "Pen-wipers" in Form III, Junior Grade, for further necessities and for directions for pasting.

When the covers have been left under pressure till they are thoroughly dry, holes for the lacing of the parts of the clipping-case together must be punched one quarter of an inch in from the back edge of the envelopes and from the back edge of the two parts of the cover. Three holes will be sufficient in each, one in the middle, one $2\frac{1}{4}$″ above the middle, and one $2\frac{1}{4}$″ below it. An ordinary eyelet punch to be used with a hammer costs ten cents and can be used by the whole class. A neat strip of the cover cloth about half an inch wide pasted down the backs of the envelopes before the holes are punched, will prevent their tearing out. If eyelets are desired for the holes in the cover, they may be obtained in brown or black and fastened in place with an eyelet setter to be used with a hammer. This may be purchased usually at a hardware store or, failing that, at a shoemaker's shop.



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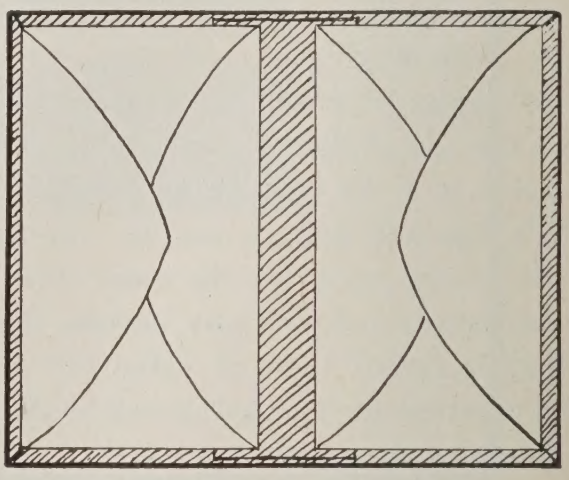


2

CLIPPING-CASE NO. 2

The two pieces of mill-board laid on the cloth The inner side of the finished clipping-case

CLIPPING-CASE NO. 2

A clipping-case that will not require lacing can be constructed to hold two large envelopes of tough manilla wrapping paper which may be made of any desired dimensions by the class. Two $5\frac{1}{4}''$ by $9''$ envelopes can be cut from $19''$ by $23''$ sheet of paper. They should be made to open from the side, not the end.

The requirements for a clipping-case to hold two envelopes of this size would be:

A piece of cover cloth $11''$ x $13\frac{1}{4}''$
A piece of cover cloth $3''$ x $9''$
Two pieces of mill-board $5\frac{1}{2}''$ x $9\frac{1}{2}''$
Two envelopes $5\frac{1}{4}''$ x $9''$.

The two pieces of mill-board should be placed on the $11''$ by $13\frac{1}{4}''$ piece of cover cloth far enough apart to leave a space from one half to three quarters of an inch wide down the middle for the hinge. When the laps have been creased and the corners cut properly, the mill-boards should be pasted in place according to the instructions given in Form III, Junior Grade. The long laps across the ends of the two boards and the space between them should be pasted up next. After the short laps are pasted up, the $3''$ by $9''$ strip of cloth should be pasted down the centre from mill-board to mill-board across the hinge. No lining papers are required, as the plain side of the envelopes is pasted against the mill-boards where the lining papers would go. (See illustrations.)

Instructions that have been given already should be followed in planning the design for the front cover.

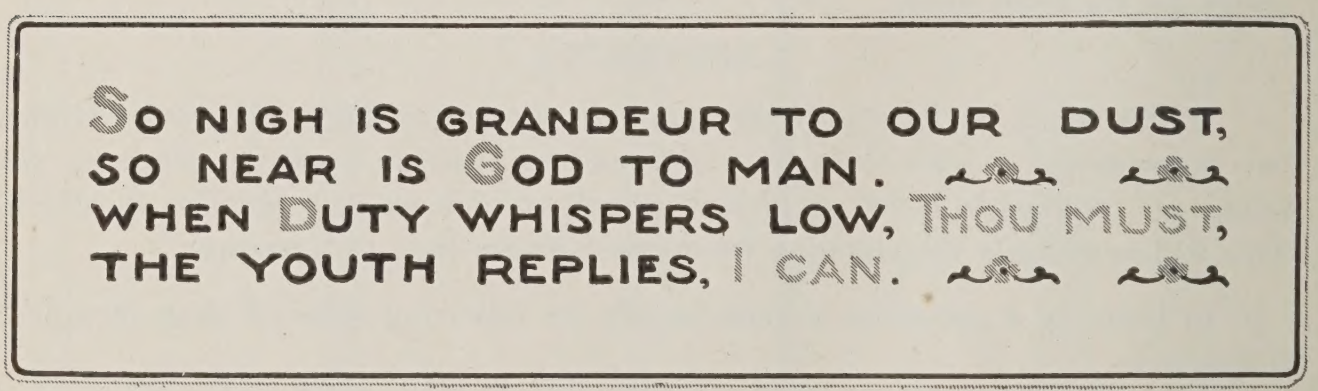
LETTERING

In this Grade the letters are the same as those used in Form III, Senior Grade, but in planning to have them fit a space a new problem must be solved, as the pupils are required to letter quotations or mottoes of more than one line in length. This will necessitate the planning for spaces between lines of lettering.

In lettering a quotation of some length the following order of steps should be followed:

1. Write the selection and consider how it may best be divided into lines approximately of the same length.
2. Lightly draw on the paper a rectangle of suitable size, allowing for good margins.

3. Within the rectangle, rule light double lines far enough apart to contain the letters agreeably, and make the space that is to come between the lines of letters no wider than is necessary to keep the lettering perfectly legible. When finished, the block of letters should appear as a unit and not as widely separated lines.
4. Sketch the first line of letters in accordance with the rules already learned, making it exactly fit the space allotted to it. This first line should set the standard of size and spacing for the letters in the remainder of the selection.
5. A simple floret or unit, such as the pupils have learned to make in lessons in Design, may be placed in any empty spaces that occur at the ends of lines or sentences and seem to require occupying.
6. After the sketch has been corrected, it may be carefully traced or copied on fresh paper, using very light construction lines where necessary.
7. If an inclosing line would improve the appearance of the whole, it may be added as a finish. A little space should be left between this marginal line and the original oblong which set the bounds of the mass of lettering, but does not appear in the finished result. This line, which should not be heavier in weight than the lettering, and the florets may be of a colour that will contrast with the letters.



CHAPTER XVI

FORM IV, SENIOR GRADE

ILLUSTRATIVE DRAWING

In the Illustrative Drawing in Form IV, Senior Grade, some particular feature which has not received special attention so far should be emphasized. As it has been planned to have landscapes and flowers used freely in the two preceding Forms, it is suggested that in this Form classes be given chiefly subjects that will require the drawing of the figure, which is especially adapted for use in poster designing. The school poster can be made very useful in connection with school closings, concerts, and exhibits of all kinds, and furnishes, moreover, a problem that appeals very strongly to senior pupils.

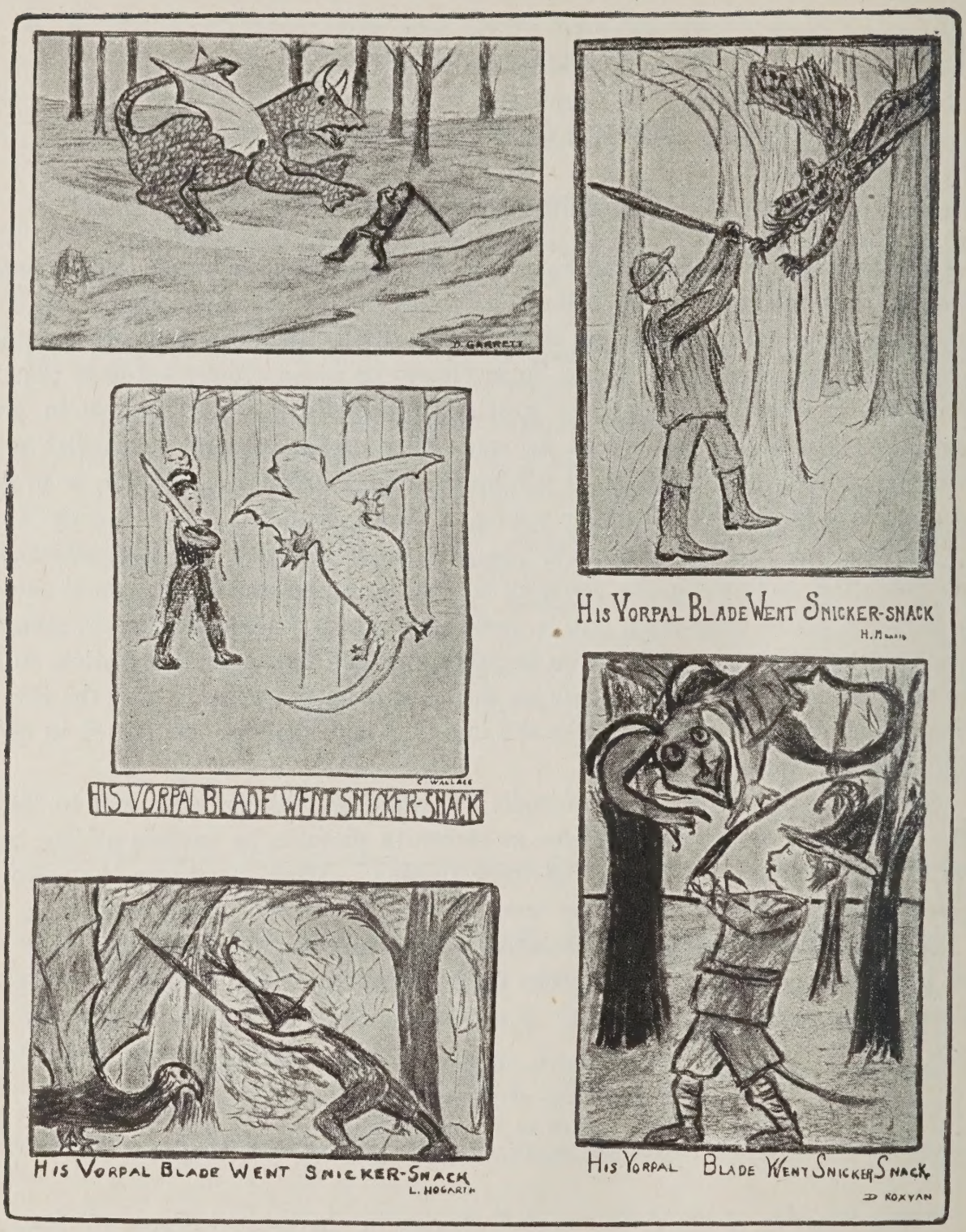
Whether the problem chosen be the making of a poster or the illustration of some quotation calling for the drawing of the figure, several quick pencil sketches may be made by the class from pupils posed in ways suggested by different members. These sketches may be made at the beginning of the lesson in illustration or may have been made in a previous lesson on drawing from the pose. From the sketches he has made, each pupil may choose the one that he considers best suited to convey the idea to be expressed.

Great care should be taken to make the important figure large and to place it well. A study of figure composition, as shown in pictures by various artists, would form a good preparation for one of these lessons. After the figure is drawn, the landscape or interior is added, as are all other necessary surroundings.

Lines suitable for figure illustration are so numerous in literature that none need be given here except perhaps the following verse, which is particularly suited for expression in charcoal:

> By his cart's side the wagoner
> Is slouching slowly at his ease,
> Half-hidden in the windless blur
> Of white dust puffing to his knees.

"The Slaying of the Jabberwock", drawn in charcoal by Form IV boys, followed a lesson on the drawing of the figure in different attitudes, in which a



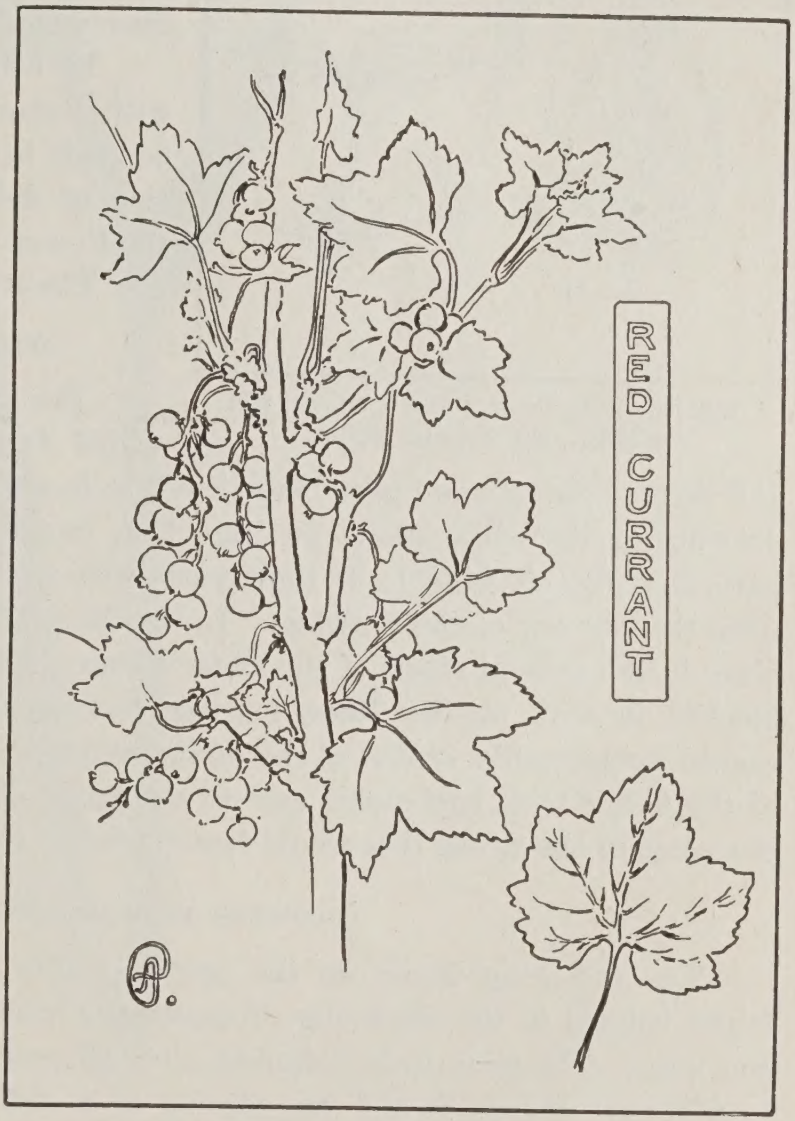
"THE SLAYING OF THE JABBERWOCK"—BY FORM IV PUPILS

number of the boys were posed in the act of drawing back preparatory to striking with a two-handed sword. The Jabberwock, being a fabulous animal, gave plenty of scope for imagination, and the boys were less hampered than they would have been with an ordinary twentieth century animal.

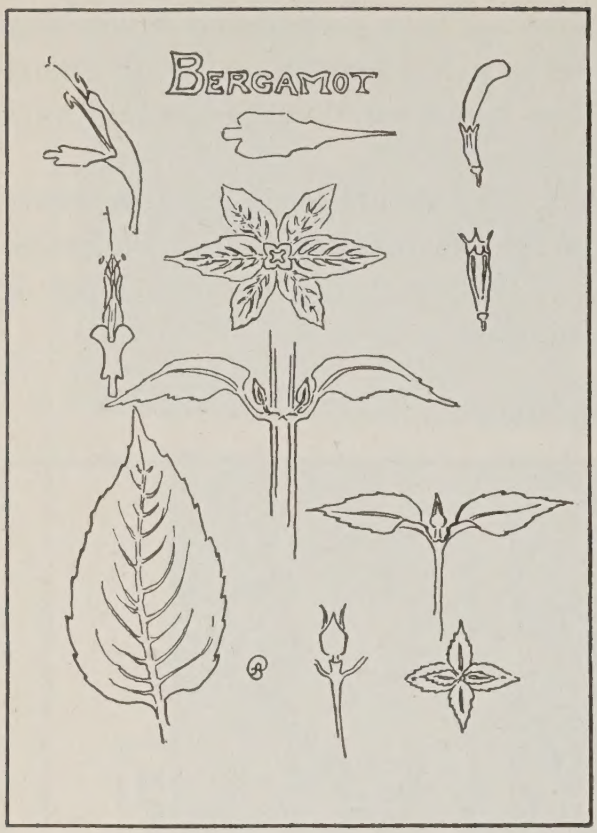
When illustrations are intended for posters, they should be finished in colour in some of the ways mentioned under Design in the detailed Course of Study. Posters are most effective when strong black is used with one or more tones of colour in such a way as to produce a striking contrast.

REPRESENTATION

The text of Form IV, Junior Grade, should be read carefully by the teacher of the Senior Grade, because many of the problems in Representation are practically the same, and in nearly every case the preliminary sketches must be made in the same way. A decided improvement in rendering should be expected, however, in the Senior Grade. The help of good examples is necessary in the teaching of rendering in any medium, and there should be in every school-room a collection of such examples so placed that each pupil may study them and compare his own efforts with them. These examples should not be used as copies and are of more help to the pupil when a similar, rather than the same, object is depicted. Information is given



CORRELATION OF DRAWING WITH NATURE STUDY



OUTLINE DRAWINGS, USEFUL ALIKE FOR DESIGN AND NATURE STUDY

in the Introduction as to where helps of this kind may be obtained.

FLOWERS

Natural specimens, such as plants or parts of plants, may be rendered in any of the ways suggested in the three preceding Forms. A choice of medium might occasionally be allowed to those members of the class whose proficiency makes such liberty of choice desirable.

In correlating the drawing of plants with Nature Study, a strong effort should be made to bring about a proper subordination of details, by the delicate quality of the line or tone used in rendering them.

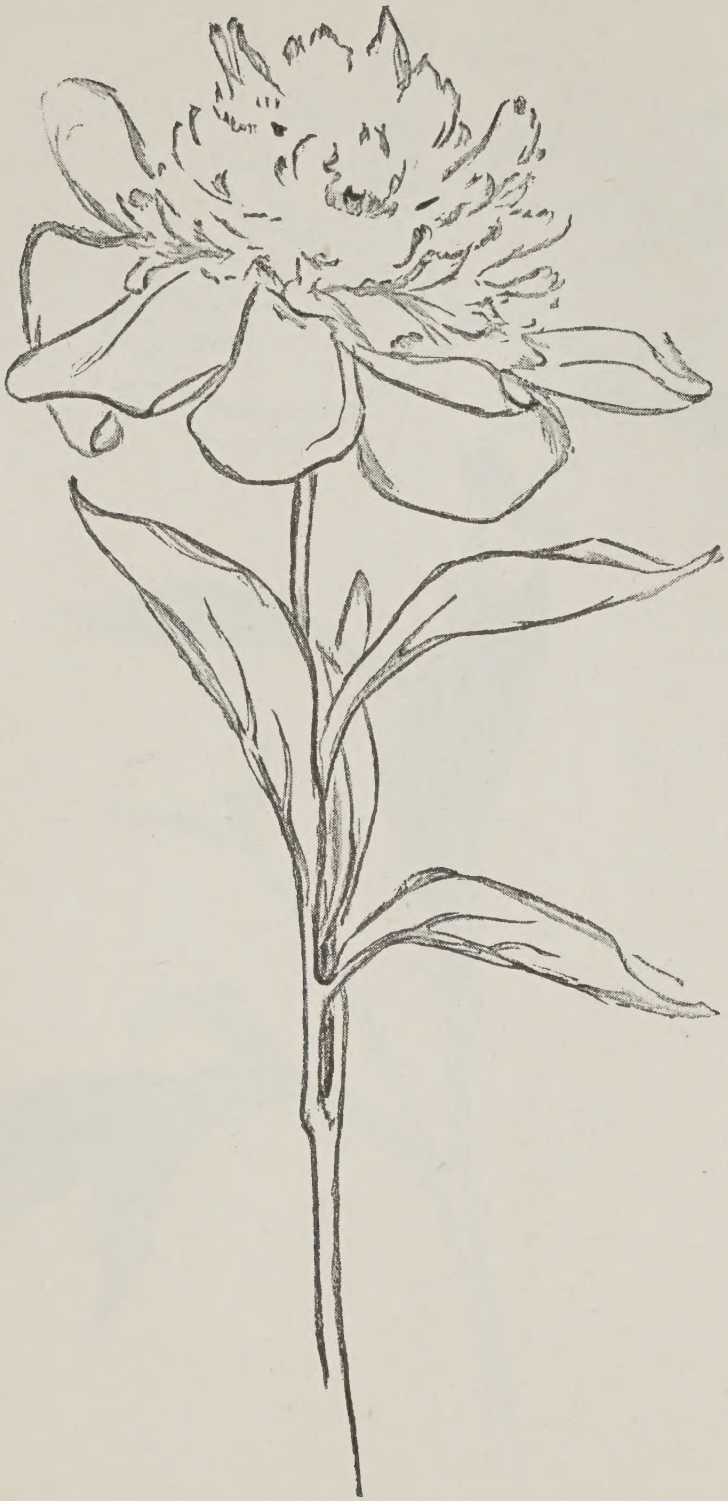
The iris is by a Form IV pupil.

WHITE FLOWERS IN PENCIL

The instructions up to this Form have called for the blocking in of the whole and then of the separate parts, but it will be found that problems such as the pencil drawing of the white peony on page 287, require so delicate a touch in certain parts that the blocking in of these parts with any preparation lines would detract from the delicacy of the drawing. In the illustration, very faint lines were used to block in the general shape of the whole flower. Then each separate large petal was blocked in with similar lines, but the touches that were used to represent the ragged pompom-like centre of the flower were put in directly, after a careful study of the flower with half-closed eyes to see which edges should be suggested and the character of the stroke that would best represent them.

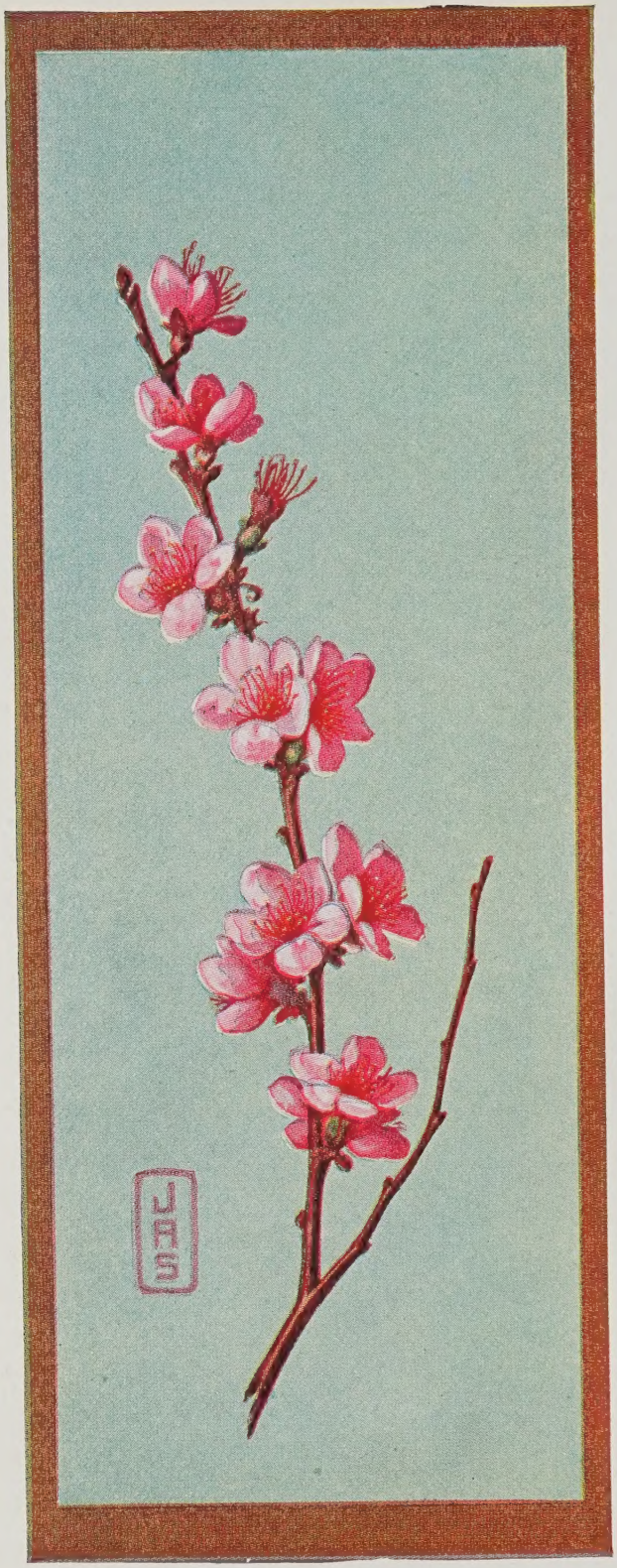
FLOWERS IN WATER-COLOUR

The following lesson on the painting of a spray of peach blossoms will be found helpful in the rendering of specimens from many different flowering shrubs and trees. The steps to be followed after all preliminary preparations with regard to necessary materials and the placing of a sufficient number of specimens have been made are:



WHITE PEONY, IN ACCENTED PENCIL OUTLINE

WHITE PEONY, IN PENCIL VALUES


JAS

DECORATIVE COMPOSITION—BY A NORMAL SCHOOL STUDENT

1. A careful study by each pupil of the specimen to be painted by him, in order that he may note the direction and character of growth of the woody stem, the change in its contour where each blossom joins it, its colour, the colour and shape of the blossoms and their arrangement in groups, the angle at which each blossom joins the stem and its position in relation to the latter, also the location of the leaf buds.
2. The testing of the different colours on a practice sheet of drawing paper to ascertain how the exact hues and gradations of tone are to be obtained.
3. The sweeping in of a faint pink direction line for the placing of the twig on the paper, and the addition of similar lines to give the angle at which the blossoms join the stem.

DECORATIVE COMPOSITION FROM BOSTON IVY—BY A NORMAL SCHOOL STUDENT

4. The painting of the petals of each blossom that comes in front of the stem with a wash of pale pink to match their lighter tones, and the touching into the centre of stronger red while the flower is still wet, in order to get the gradation from pink to crimson that is observed.
5. The painting in a similar way of the blossoms at the sides, paying careful attention to their foreshortened appearance and adding a little blue to the pink for those petals which are in shadow.
6. The painting of the blossoms that are half-hidden by the stem.
7. The painting of the green calyxes, adding touches of red in the sepals.
8. The painting of the stem and buds, beginning with the bud at the tip and painting the lighter side of the stem first with a brown obtained by adding yellow-green to red with sufficient water.
9. The painting of the darker side with strong brown obtained by using more colour and less water in the brush than for the previous step. The shiny streak on the stem may be got by wiping out the colour with the dried brush before the stem is dry or by leaving a narrow strip of the white paper unpainted. As soon as the stem is finished, a clean, damp brush should be drawn down this white strip to soften the light and allow the sides to blend slightly.
10. The painting of the stamens with fine, dark, crimson lines. and the touching in of the tiny brown anthers.
11. The addition of any touches that a final comparison with the specimen shows to be necessary to the truthful representation of it.

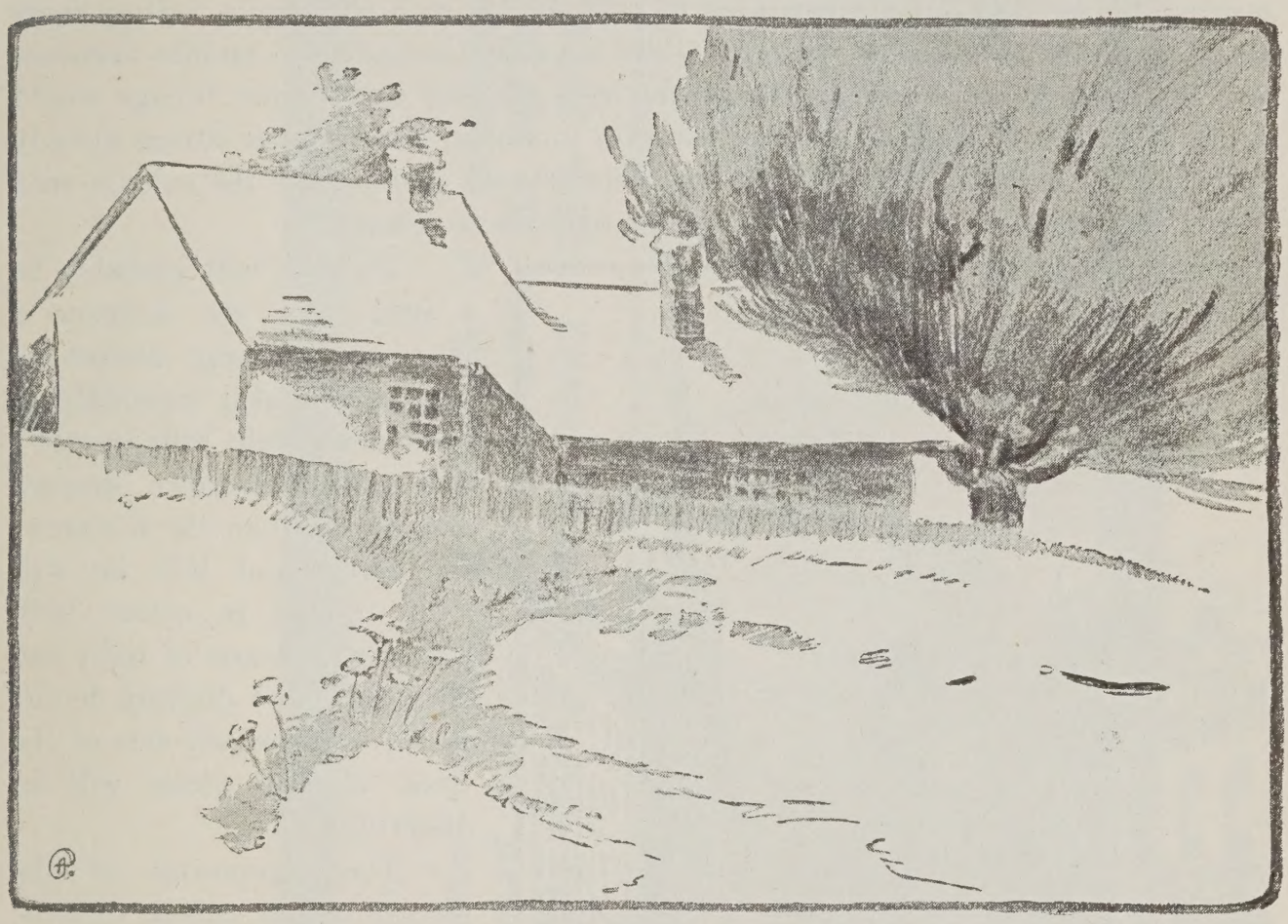
TREES AND LANDSCAPES

If the study of trees has been carried on in the manner suggested in the preceding Forms, the pupils in this Grade should require very little exercise in the drawing of single trees; their attention should be directed more to the sketching of groups of trees and the placing of trees in a landscape with due regard to convergence and foreshortening.

Frequently a Senior class is sufficiently interested to make outdoor sketching a profitable exercise. An old house in the neighbourhood, with long, simple lines, will furnish a good subject for sketching and one that may be used to advantage afterwards in landscape composition.

For outdoor sketching pupils will require a drawing board or heavy piece of mill-board as large or larger than the paper used, which should be about 9″ by 12″ and should be attached to the board with thumb tacks or pins.

Subjects for outdoor sketching may be given as home exercises. A Saturday should be allowed to intervene before these are handed in. When all have been received, they should be put up for class criticism and examined with regard to placing of the horizon, supposed position of the observer, proportion, convergence, foreshortening, expression of distance, and the general effect of each drawing as a



AN OLD HOUSE WITH LONG, SIMPLE LINES

whole. After this criticism, each pupil should take his drawing home in order to compare it with the original view in the light of the criticisms that have been made. A memory sketch of the same view should follow as the next lesson in class. The view of a street, such as the one illustrated, would be a suitable subject for a home exercise to be treated in this way.

Landscape settings will be required for some of the figure compositions, and this use to which they may be put should be kept in mind when views are being

drawn. The treatment of landscape composition in connection with lettering is shown in the framed motto opposite this page.

THE PAINTING OF A LANDSCAPE IN WATER-COLOURS

Early in September, before taking the first lesson in landscape painting, the teacher should discuss the appearance of a landscape with the pupils, calling their attention to the fact that it may be divided into sky, background, middle distance, and foreground. A sunny day when the trees are still in Summer foliage would be the best time to choose for this discussion in which, among other things already spoken of in landscape composition, the class should contemplate the colours seen in the landscape and the effect distance has upon these colours.

A SUITABLE SUBJECT FOR A HOME EXERCISE,
(View from an elevation)

The sky will probably be a pale blue; the distance a blue or blue-gray almost as pale as the sky, especially if there are distant hills in view; the middle distance greener and darker than the distance; the foreground will be still more intense in colour with stronger contrasts of light and dark and more distinct details while, in the shady side of the trees, blue or violet will be discernible.

The composing of the picture should also be referred to, and the pupils should be warned to remember the rules of good composition when planning their landscapes.

At a convenient time after this discussion, when the pupils have opened their paint-boxes and moistened the cakes and everything is in readiness

TO-DAY WELL LIVED MAKES EVERY YESTERDAY
A DREAM OF HAPPINESS AND EVERY
TO-MORROW A VISION OF HOPE

for the lesson, the teacher may make a rapid demonstration of the different steps. The pupils should then proceed as follows:

1. Draw a rectangle about 4″ by 7″ on the paper, leaving satisfactory margins, and indicate the horizon with a light line drawn across the rectangle either more or less than half-way down, according to the height of the tree masses that are to come against the sky in the picture planned.
2. Mix a pool of pale blue wash for the sky, one of yellow-green for the sunny grass-covered earth, and one of deeper, richer green for the trees. When variations in these tones are required, the class will work from both pool and cake.
3. Hold the paper at a slight incline or place it on a slanting board or book and apply the sky wash evenly and quickly across the top of the rectangle, bringing it smoothly down to the horizon.
4. While the sky is still quite wet, paint a brushful of the yellow-green into the lower edge of the sky, bringing it down with wide strokes and plenty of wash toward the bottom line, where a little of the stronger green may be dropped in.
5. With the sky and ground colour still wet and partly sunk into the paper, paint the masses of distant trees across the horizon, making some trees short and one group taller than the rest to give variety. The distant trees should not dry with hard, sharp edges against the sky, but should appear softened or blurred slightly into it. A few strokes of blue-violet touched into the lower part of the woods will give the right shadow effect for distant woods.
6. Before the background has had time to become quite dry, shape the masses of foliage of the nearer trees with bright yellow-green. Deeper green and violet will give the darker effect to the parts in shadow. The same colours may be used for the flat shadows on the grass under the trees in the immediate foreground.
7. When the tree masses are almost dry, paint the trunks and any branches that are not hidden by foliage, with dark gray-violet.
8. Make a few faint strokes and touches for grasses or other plants near the lower edge of the sketch.
9. After a final study of the picture, add any dark touches to the objects in the foreground that seem necessary to bring them out.

10. Add a firm inclosing line to the picture, using some dark tone that will harmonize with it.

Where a building is introduced in the landscape, its outlines must be sketched lightly first and the sky painted to them. The same precaution is necessary when any object that is very light in colour is a feature of the landscape.

WINDOW SKETCHES

Views from school windows often afford valuable opportunities for lessons in composition, mass drawing, tree study, convergence of receding lines, and foreshortening of surfaces.

While the outlook from the city school windows may be more restricted than from rural ones, the teacher will find abundant opportunity for the representation of objects in a given inclosure. The framing of the subject by the whole window or even by a single pane, has the effect of excluding confusing surroundings, and thus gives the young student practice in choosing good compositions. The vertical and horizontal lines of the framework of the window will be found of great assistance in fixing the apparent direction of receding edges and determining the proper proportion of space to be allowed for foreshortened surfaces.

THE DRAWING OF A WINDOW SKETCH

The class should be directed to look at the windows and describe what can be seen through them from the seats, while each pupil is sitting in one position. As in all probability objects beyond can be seen through several windows, each pupil should decide which window affords him the most pleasing view. This view may be roofs and chimneys, with a varied skyline silhouetted against bright clouds, or perhaps a tree and a fence with a field beyond. The class should be told to think of the view chosen as though it were painted on the glass. Each pupil should then draw with pencil on his paper a rectangle which is to inclose the view as seen through the window and leave a suitable margin all around.

The pupils, having been cautioned not to move forward or change position in any way, should begin by drawing the most prominent line in the view, proceeding from this to other important lines, leaving minor details to the last. If there are trees, light lines may be drawn for the main branches in order to locate the

masses of foliage. If there are buildings, their outlines should be drawn before windows or chimneys are placed.

This will occupy one lesson preparatory to colouring, which may be done in a later lesson in the following way:

COLOURING A WINDOW SKETCH

The class should first prepare a sky wash according to the time of day at which the sketch is being painted. This wash should be applied first, brought down below the tree tops, and allowed to dry. The trees may be painted next, then whatever shows in the foreground, and, finally, details, of which only the most important should be indicated.

The rendering should be kept very simple throughout and rather flat in effect. When dry the main masses may be lightly outlined with dark colour, unless they are already strongly defined. A firm line of dark colour should cover the pencil line inclosing the original oblong.

When some of the pupils can see nothing but sky or tree tops from the seats, they may be allowed to stand at a window and use small finders, which will inclose more distant views.

DRAWING FROM THE FIGURE

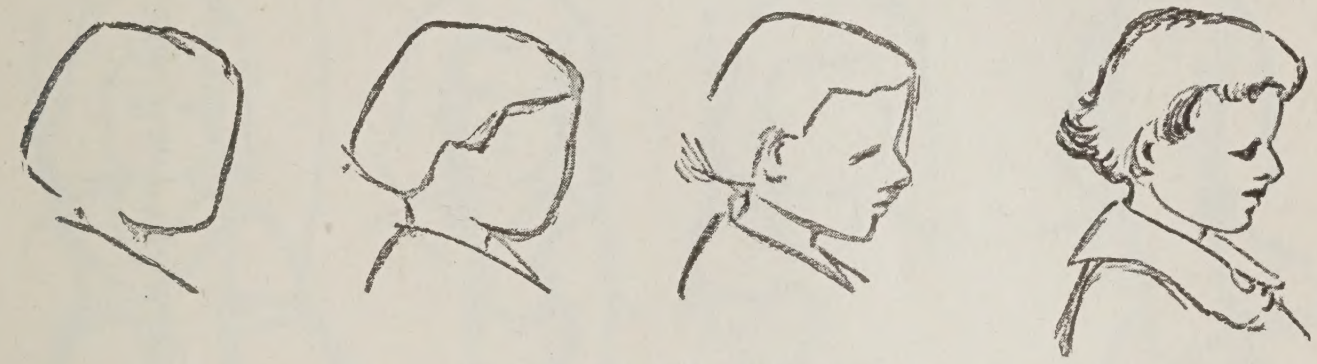
Very few instructions for the drawing of the figure, other than those already given in the preceding Forms, are necessary here. Some of the vigilance that has been required to keep the attention of the class directed to the action of the figure may now be relaxed and greater stress placed upon proportions. Careful pencil measurements should be taken after the main proportions of the figure have been indicated.

It has already been stated that the head is taken as the unit of measurement, and it will help pupils to discover their mistakes in proportion if they know that the average adult figure is seven and one-half heads high with a measurement across the shoulders of two heads; an infant a few months old measures four heads and has shoulders no wider than the head; a child of five years is six heads high with shoulders very little wider than the head; while the average child of nine years is six and one-third heads high with shoulders one and one-half heads wide. Knowing these measurements, a pupil will at once realize that if his drawing appears to represent a younger child than the one who has posed for the class, the head must be too large in proportion to the height and width of the figure; whereas if

A POSE THAT MIGHT BE USED IN A POSTER FOR A SCHOOL FAIR

the drawing looks like the sketch of an older person than it was intended to represent, the head is too small in proportion to the height and width of the figure.

Drawings from the figure in this Grade may be expressed in any medium that has been used in the preceding Forms, and the pupils should be encouraged to cultivate the habit of making memory sketches at home from children or older persons whom they have observed in the play-grounds or on the street. As much of the figure drawing in this Form is intended to be used in the making of posters, the greater number of the sketches made in class should be planned in pencil outline, to be finished in some of the ways mentioned under Decorative Composition in the text for Form IV, Junior Grade, and under Illustrative Drawing in the text for this Grade.

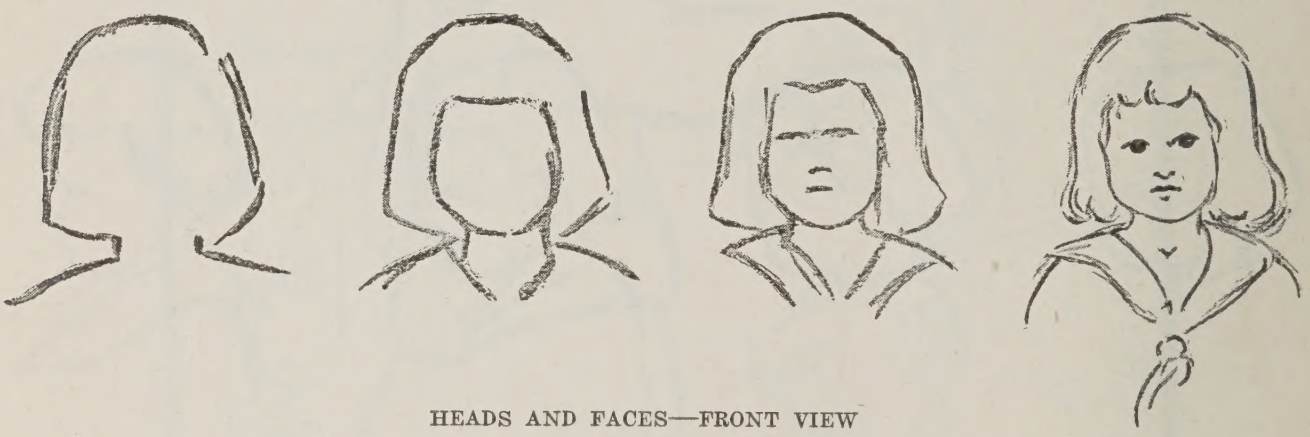


HEADS AND FACES—SIDE VIEW

HEADS AND FACES

When the pupils can make from the figure rapid pencil sketches showing good action and good proportion, they may be allowed to indicate the features in a very simple way. In order to teach them to do this, a lesson or two on heads alone will be necessary. The head should be blocked in with light lines and should be of good size and well placed upon the paper. The neck and the line of the shoulder should also be indicated. The line of the hair framing the face should be blocked in next. In the front view, a faint horizontal line may be sketched across the face, half-way between the top of the head and the base of the chin, to help in placing the eyes. Another line a little less than half-way down between the line for the eyes and the base of the chin will locate the end of the nose and the lower rim of each ear. A line one third of the distance from the end of the nose to the base of the chin will give the position of the mouth. If the head be tilted backward, each of these placing lines becomes the upper curve of an ellipse and must be so drawn.

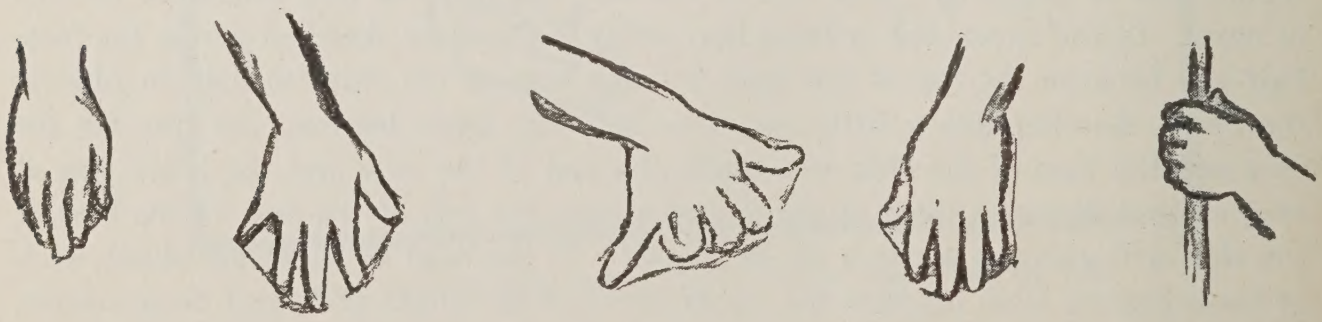
If the head be bent forward, the placing line in each case is then the lower curve of an ellipse. The eyes are usually about the width of an eye apart. The ear is usually a little longer than the nose, and this brings the upper rim of the ear slightly above the line for the eyes. When the placing of the features has been indicated, they should be blocked in lightly, and the form suggested in the simplest possible way. The illustrations show clearly the steps to be followed in drawing both a side view and a front view of the face. Care must be taken in the side view to place the neck well back under the head and get the correct angle at which it joins the head. It will be noted that the base of the chin comes well below the point where the head and neck join at the back.



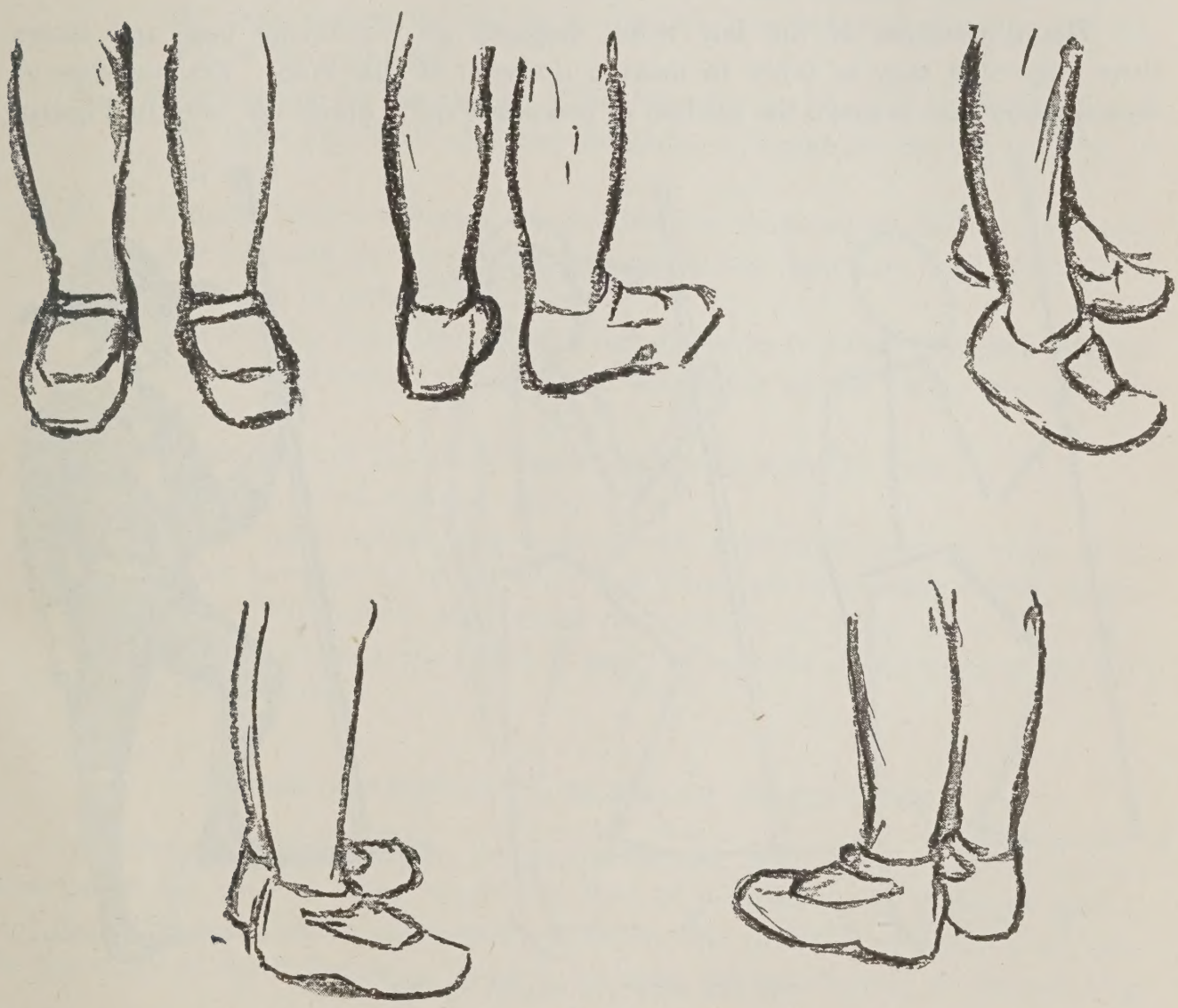
HEADS AND FACES—FRONT VIEW

HANDS AND FEET

After the direction line or axis of the hand has been placed and the whole hand has been blocked in, the separate fingers may be indicated. Greater attention, however, should be devoted to the direction, shape, and proportion of the hand than to the placing of the fingers.



In drawing the feet, the direction line for each foot may come first, to ensure their right relation to each other; the ankles may be placed next, and each foot blocked in. The arch beneath the instep will fall into place easily, when the general shape of the mass is correct; it is better, however, to leave it out than to exaggerate it. It will be noticed, in a front or back view of the foot, that the ankle bone is higher up and more prominent on the inside of the leg than on the outside. The side view of the foot is not difficult to draw, but the most careful attention to foreshortening is necessary in every other position in which the pupil is likely to see it.



In order that the feet may be seen in their usual position in relation to the observer's eye, the model should be posed, if possible, so that the pupils are looking down at the feet; sometimes this can be managed by having the class stand to make the sketch.

Although the above instructions are given in order that the teachers and the pupils who wish to undertake the drawing of the features and other details may know how to go about it, it must be distinctly understood that the putting in of these details means the carrying of this subject further than is expected from pupils in the Public and Separate Schools.

THE BOY SCOUT, IN PENCIL VALUES

The illustration of the Boy Scout suggests an interesting pose and shows three steps that may be taken in making a sketch of this kind. For purposes of reproduction and to make the method of procedure quite plain, the lines in Figures

THE BOY SCOUT, IN PENCIL VALUES

1 and 2 have been made heavier than the preliminary lines of a sketch should be made. Figure 1 shows the action lines or framework on which the figure is to be built. Figure 2 gives the blocking in of the shape on these action lines. Figure 3 shows the finished sketch. It is neither necessary nor advisable to put in the action lines in every drawing of the figure. They should be kept in mind, however.

This sketch might have been made according to the following steps:

1. Slightly curved lines feeling for the top of the hat and the toe of the left foot, to place the height of the whole figure
2. Slanting lines, one to locate the line of the right shoulder and the base of the neck, others for the waist line, the placing of each knee, and the sole of the right foot
3. A swinging line for the outside of the left arm and the corresponding line of the right arm from shoulder to elbow, and another for the position of the staff
4. A swinging stroke to locate the outside line from hip to heel on the boy's left side and the corresponding lines on his right side from hip to knee and knee to instep
5. A line swinging from the staff through the body to locate the lower edge of the right forearm, the curve of the blouse at the waist, and the left elbow
6. The blocking in of the whole figure, beginning with the head
7. The blocking in of separate parts
8. When this faint outline sketch is correct, a decision must be made as to which parts are to be left white and which are to be made as dark as the pencil will permit and, when the outlines of these parts have been faintly indicated, the sketch is ready to have the pencil tones evenly and firmly applied.

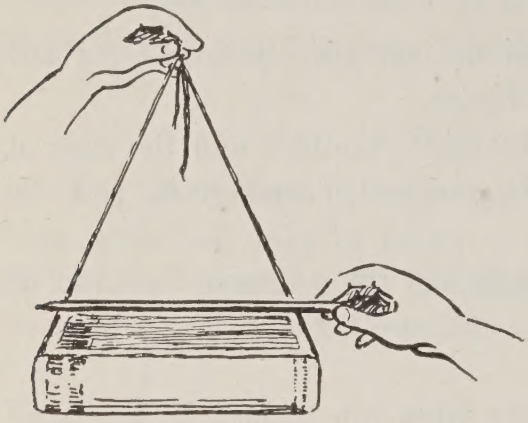
SERIES OF LESSONS IN FREEHAND PERSPECTIVE

In Form IV, Junior Grade, the pupils learned, with various aids to correct observation but without being taught the laws of perspective, to represent with a fair degree of accuracy the appearance of rectangular objects in different positions. In the study of the "Avenue of Trees", however, the convergence of the receding

lines to a point on the horizon line was very apparent, and the first principles of perspective taught should be the outcome of the observations made in that lesson.

The pupils learned, among other things, to locate the horizon line; that this line is always on a level with the eye; and that all receding parallel horizontal edges appear to converge toward a point in the horizon line opposite the eye of the observer.

The pupils may prove that this latter principle holds good even in small objects, by using a string at least a yard and a half long and an ordinary school-book in the following way:



Let each pupil place his string under the top cover of the book close to the back, leaving the free ends of string of the same length.

Next, let him place the book level in front of him on his own desk and, with the ends of the string in his hands keeping them parallel to the picture plane, bring them together in such a manner that they will seem to coincide with the receding edges of the book. He will find that the point where they meet is on his eye level.

TESTING FORESHORTENING AND CONVERGENCE

Let him now lift the book on his left hand, keeping it level, and discover by raising and lowering it, that no matter at what height it is in relation to the eye level, the strings, both ends of which are held in the right hand, will always meet at the eye level if they are kept in a vertical plane and so that they appear to cover the receding edges of the book.

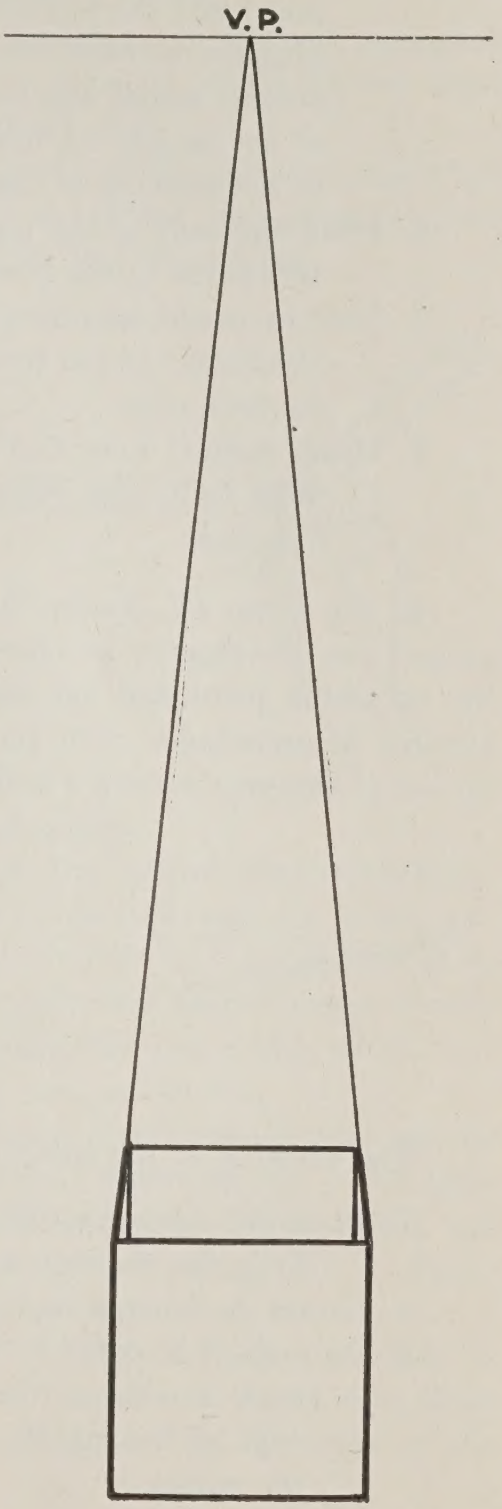
This is true also if the book be studied above the eye level; in which case the string is placed inside the lower cover, and the book is lifted on the hand as before, but above the level of the eye. It will be found that the strings still meet at the eye level, which is now below the book.

All these observations should be made with one eye closed.

In the following series of lessons in Freehand Perspective, the same steps that were taken in the series of lessons on the cubical model for Form IV, Junior Grade classes are followed, the only difference being that vanishing points are actually

found in the series for this Form. The same materials and preparations are necessary, and the teacher should see that the class is properly prepared for each lesson.

I



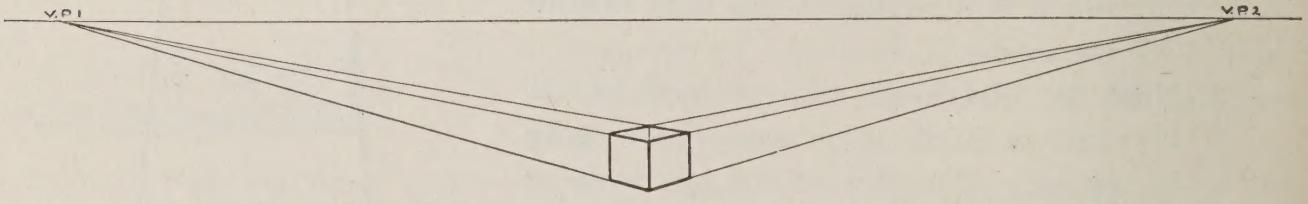
The drawing of the cubical model with its front face parallel to the eye, after having discovered and placed the vanishing point.

1. Seat the class in the manner described in the second lesson in the series for Form IV, Junior Grade, and let each pupil place his cubical model on the desk ahead of him, with one of its faces turned toward him exactly in front of and parallel to his eyes. He must not forget to slip the ruler or a strip of cardboard under the front lower edge, so as to make the model perfectly level.
2. Each pupil should next place a sheet of paper on his desk, with the short edge from left to right, and draw upon it, close to the bottom edge, a square which will represent the near face of the model.
3. Next, let him locate his eye level on the wall in front or on some intervening object. This line of the eye level, as has been shown in a former lesson, corresponds with the horizon line.
4. By pencil measurement let him find the apparent height of the front face of the model and see how often this measurement is contained in the distance from the top edge of the front face of the model to the eye level.

5. Let him now measure the height of the drawing already made and place a point directly above the middle of it, making the distance between this point and the top edge of the drawing as many times its height as the distance between the actual eye level and the top of the front of the cubical model was found to be of the apparent height of the front face of the model. A line drawn through this point parallel to the top edge of the drawing of the front face will represent the horizon line.
6. From the ends of the top edge of the drawing, draw light lines to meet at this point in the horizon line.
7. Find by pencil measurement the proportion that the foreshortened top is of the height of the front face and place a line in the drawing to represent its back edge.
8. Draw vertical lines from the points where this line meets the converging lines to the top edge of the front face, to represent the inner corners at the back.

In the Form IV, Junior Grade lesson which corresponds with this, the pupil gauged the convergence by observation alone: in this lesson he has actually found the vanishing point and has represented the receding edges of the model as converging in accordance with the law that *All receding parallel horizontal edges appear to converge toward a point on a level with the eye.*

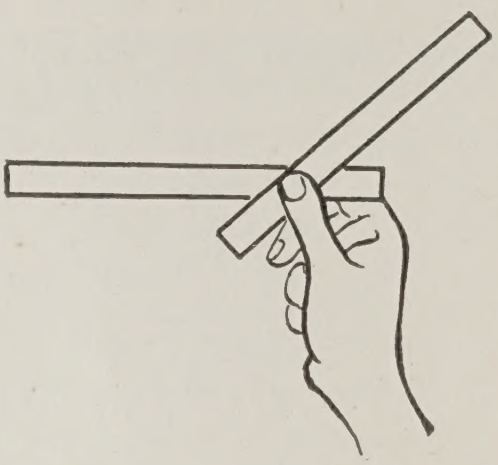
II



The drawing of the cubical model at an angle of forty-five degrees.

1. Place the cubical model exactly in front on the desk ahead, at an angle of forty-five degrees, making it perfectly level.
2. Locate the horizon line as in the last lesson.
3. On a sheet of paper 9″ by 12″ turned with its long edge from left to right, draw a vertical line about half an inch high not far from the bottom edge of the middle of the paper, to represent the near vertical edge of the model.

4. Find how often the near vertical edge of the model measures into the distance from its top to the eye level, and place a line a proportionate distance on the paper above the edge already drawn.
5. With the help of a horizontal thread, as explained in the corresponding lesson in the Junior Grade, estimate the angles at which the top edges of the two front faces join the near vertical edge.
6. Through the top of the vertical line on the paper which represents this edge, draw a light horizontal line to stand for the thread, and place the lines which are to represent the top edges of the two front faces.
7. As, even when great care is taken, the angle formed by these two lines may be slightly inaccurate, a further test is necessary. With two straight-edged strips of cardboard, or stiff paper, held as in the illustration, parallel to the picture plane, measure this large angle at the top made by the joining of the two top edges at the front corner. Keeping the strips of cardboard in exact position, lay the angle thus formed on top of the same angle in the drawing and correct it if necessary.



8. Produce the corrected lines until they meet the line representing the horizon. This will give two vanishing points, one to the right and one to the left.
9. Since all receding parallel horizontal lines converge to the same point in the horizon line, the lower edge of the right face will converge toward the point already found at the right, while the lower edge of the left face will converge toward the vanishing point at the left.
10. When these are drawn, the further edge of each foreshortened side may be indicated after it has been found by pencil measurement. The lines necessary to complete the drawing will represent edges which are parallel to those which have already been represented and will be drawn to converge toward the same vanishing point.

In this lesson we exemplify the law that *Parallel horizontal edges receding to the left appear to converge to a vanishing point at the left of the object; those receding to the right appear to converge to a vanishing point at the right of the object.*

We have found also, in the drawing of the cubical model at an angle of forty-five degrees, that *When the faces of a rectangular object are turned away equally, the vanishing points are equally distant from the point nearest the observer.*

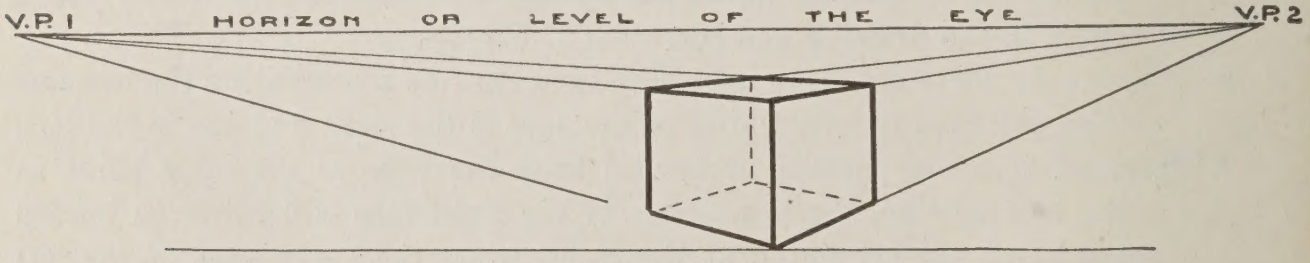
That pupils may see the convergence to left and right just as clearly as they saw the lines converging to a point directly in front in the avenue of trees and also in the book with the string, a large wooden or pasteboard cube may be prepared, with two strings attached to each end of the near vertical edge and a single string to each top corner to the right and left of the near vertical edge. It will require two pupils, one at each side of the cube, to hold the strings, so that another pupil may stand in front of the cube and direct the holding of the strings in such a way that the actual convergence to a point on either side can be seen by him.

This exercise is merely recommended as being one in which the pupils would take great interest in discovering a law for themselves. They might also be counselled to stand exactly in front of the corner of a large building at a little distance from it, to note for themselves the converging lines of roof and foundation.

III

The drawing of the cubical model at an angle other than forty-five degrees.

In this lesson the steps will be similar to those taken in the preceding lesson, excepting that when the angles with the thread are measured, they will be found



LARGE CUBE NEAR THE LEVEL OF THE EYE

to be unequal in size. Therefore the angle made by the two strips of cardboard to correspond with the large angle at the top of the near edge of the model will not only have to be measured very accurately but, while it is still held in position, a vertical line will have to be drawn to coincide with the near edge of the model, so that when the cardboard angle is placed in position on the drawing, this vertical line will fall on top of the vertical line which represents the near edge of the model.

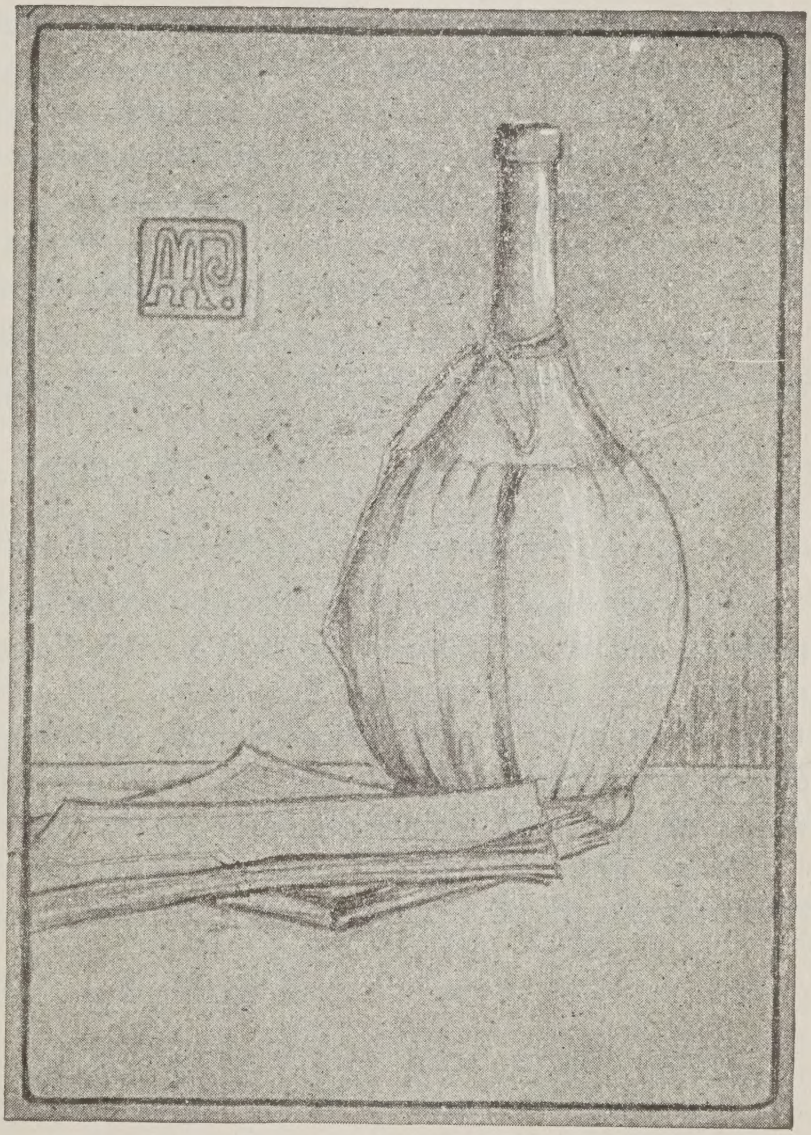
When the lines thus found are produced to meet the line representing the eye level, the pupil will discover that *When the faces of a rectangular object are turned away unequally, the vanishing points are unequally distant from the point nearest*

the observer, and that the greater the angle, the nearer the vanishing point is to this point.

SOME PRINCIPLES OF PERSPECTIVE

In addition to the rules on convergence which have been emphasized in the preceding lessons, the following principles of perspective may be recorded as having been observed:

1. Vertical edges always appear vertical.
2. Horizontal surfaces of any shape, when viewed at the eye level, appear as straight lines.
3. Horizontal surfaces, when viewed above or below the eye level, appear foreshortened, and their apparent width from back to front increases as they are elevated or lowered.
4. The apparent width from back to front of horizontal surfaces increases or decreases according to whether they are near or far from the eye on the same plane.
5. Vertical surfaces turned away from the eye appear foreshortened in proportion to the angle at which they are turned: the greater the angle, the greater the foreshortening.



AN INTERESTING GROUP

After this series of lessons, the pupils should be prepared to undertake the drawing of any interesting rectangular objects placed on the boards across the aisles, somewhere in front of them, in plain view.

In every case they will turn to face the model and, although it may be placed so that one of its faces is parallel to the edge of the desk, it is, nevertheless, when in that position, at an angle to those who are drawing it and must be so represented. In freehand perspective there is no such problem as the drawing of an object alone to the left or right of the observer in parallel perspective.

While a knowledge of the foregoing principles of perspective is necessary, in order that pupils may detect errors in convergence and foreshortening in their drawings, these principles should be considered as a means for this purpose rather than as rules according to which the drawings are to be made.

In making use of the laws of perspective to test the accuracy of drawings, it will be found necessary to imagine vanishing points beyond the limits of the paper and make the lines converge toward these points.

USE OF DIAMETERS AND DIAGONALS

When representing rectangular objects, the drawing of diameters and diagonals will be found of great assistance in the accurate placing of details.

PICTURE STUDY

THE GOLDEN STAIRS—SIR EDWARD BURNE-JONES

The suggestive lessons on Picture Study in the preceding Forms contain methods and ideas that may be used in this Form. Some law or laws of composition were dwelt upon in each lesson. As a result, pupils when they reach Form IV, should be able to discover and enjoy the proportion, balance, harmony of line, arrangement of dark and light, and other principles by the observance of which the artist has produced the effect he desired.

From Form III up the picture studied and the artist who painted it may constitute the theme of an essay to be written subsequently by each pupil.

THE ARTIST

Edward Burne-Jones, born in the year 1833 at Birmingham, England, was the son of a small tradesman of Welsh descent. His mother died at his birth. The lonely child was brought up with great strictness by his rigid parent, who would

not allow him to read poetry or story-books. Possessing, without doubt, even in his childhood, a rare imagination, he must have starved for beauty in his unattractive Birmingham home.

His father desired him to become a clergyman of the Church of England and, with that end in view, sent him at the age of eleven to a good school. Here the world of books, especially of poetry, in which he found intense pleasure, was opened to him. Later, he went to Oxford University, where he met William Morris, whose tastes and aspirations were so similar to his own that they became lifelong friends. Together at Oxford they pored over the two books that so greatly influenced the future of both, Ruskin's *Modern Painters* and Mallory's *Morte d'Arthur*.

While at Oxford Burne-Jones saw some of Rossetti's pictures, and when it dawned on him that this man, actually living in the present, was doing what he longed to do, he determined to be a painter.

In 1855 he met Rossetti, who recognized his rare gifts and urged him to begin the serious study of Art at once. Without waiting to take his degree he settled in London, where he was soon followed by his Oxford friend, William Morris. The two were constantly with Rossetti, who warmly commended the poetry of Morris and the designs of Burne-Jones.

Burne-Jones owes much of his early success to the friendship of Rossetti and Ruskin, who both put opportunities for advancement in his way.

Not having had any early training in drawing, it was incumbent on him to overcome this defect, which he did with such success that every detail in his best pictures is exquisitely drawn. He was an indefatigable worker, producing, besides his paintings in oils and water-colours, great numbers of designs for stained-glass windows and other matters in connection with house decoration and the ornamentation of furniture.

His early work shows the influence of Rossetti, but later he developed a style peculiarly his own, though traces of the influence of the old masters, especially of Botticelli and Mantegna, can be detected in his pictures. He took great delight in mosaics, of which he made many; even his pictures partake of the nature of these, each appearing to be designed as a beautiful pattern into which the separate parts are fitted with exquisite taste. One critic claims that they are lacking in coherent structure, but to others no such fault is discernible. He was a thorough idealist; the present had no attraction for him as a painter, and almost invariably his pictures were of pure romance and wonderland. There is great power and beauty in the arrangement and quality of his lines and in the portrayal of his faces, in which continually recurs the same wistful but always interesting expression.

His manner of painting has been criticised as morbid and often imitative. It is pointed out with censure that in many of his pictures light and shade is lacking and that his figures are unnaturally tall and slender and his heads hungry-eyed, hollow-cheeked, and wan; but, in spite of all these mannerisms, he was one of the most creative artists of the nineteenth century and possessed great power and originality.

Many artists die unrecognized; but Burne-Jones, in his life, was thoroughly appreciated. He was the recipient of many honorary degrees and was made an associate of the Royal Academy. The Cross of the Legion of Honour and, finally, a baronetcy were bestowed upon him. His pictures were always popular, and the Grosvenor Gallery where they were exhibited was thronged by a crowd of worshippers.

He was at work upon his last picture, *The Sleep of King Arthur, in Avalon,* a few hours before his death, which took place in London in 1898.

THE PICTURE

The picture is now in the possession of Lord Battersea. It was designed in 1872, actually begun in 1876, and finished in 1880. The name was changed from its first title, *The King's Wedding* to *Music on the Stairs,* and finally to *The Golden Stairs.*

Burne-Jones had spent sixteen years at the work he loved when this dream began to take shape in his mind. For eight years it was being formed and perfected before it finally appeared on canvas, in the words of Monkhouse: "A picture almost as sweet and delicate in its colour as a white lily".

Some message full of meaning he must have desired to convey to those who were to behold it. The three successive titles give us a clue and show his effort to make his meaning clear. *The King's Wedding.* What King? That ascetic mind of his, moulded by the simple piety of his austere father to be coloured later by his training for the Church, might be expected to go to Holy Writ for inspiration. Was it the parable of the marriage of the King's son of which he was thinking? Something in his thought may have linked the picture to the parable, yet this title he feared might not convey his message. *Music on the Stairs.* But how could such a title serve when, although so far as we can tell each maiden carries a musical instrument, yet only three make any effort to play, and they in a half-hearted way and without regard to each other. *The Golden Stairs.* He must have desired particularly to call our attention to the stairway, since it appears in the rejected

second title, subordinate to the music, and becomes the glorified *Golden Stairs* of the final title. What is this stairway that begins at that mysterious doorway beyond which our eyes cannot pierce and ends at the pillared chamber, beside the entrance to which a laurel grows? Down this narrow stairway of marble, beside which no railing runs to guard the feet of those who tread it, winds a procession without beginning and without end.

Burne-Jones was charged with being a pessimist; he must have desired to give to this picture in which no gladness is expressed, one optimistic touch in that last title, *The Golden Stairs.*

Henry Turner Bailey's interpretation of it in *The School Arts Book* for April, 1909, is a revelation to us. He compares it with Emerson's poem:

> Daughters of time, the hypocrite Days,
> Muffled and dumb like barefoot dervishes,
> And marching single in an endless file,
> Bring diadems and faggots in their hands.
> To each they offer gifts after his will;
> Bread, Kingdoms, stars, and sky that holds them all.
> I, in my pleached garden, watched the pomp,
> Forgot my morning wishes, hastily
> Took a few herbs and apples, and the Day
> Turned and departed silent. I, too late,
> Under her solemn fillet saw the scorn.

He speaks of the picture as another poem divinely beautiful in which the daughters of Time, the Days, marching in single file, form a procession of memories along the stairway of life. Thus we view the days, hastening eagerly forward at the first, as in childhood we long for the time when we shall be grown up and dream of the things we shall do then. Later they crowd fast one upon the other as the swift years do when we have crossed the meridian of life. We know how prone the old are to live in the past and to exaggerate the importance of things that happened when they were young. Doubtless with this thought in his mind, the artist has made his figures at the last all look back and, without regard to perspective, has made those where the procession begins loom as large as those at the end.

So similar are the figures they seem almost like units repeated to form a border; yet no two are quite alike in dress or appearance, and some are garlanded with flowers, some with leaves, and some wear bands of crape. Strangely enough the faces of the last maidens are fresh and fair as those at the beginning, and to our minds come Susan Coolidge's cheering words:

Every day is a fresh beginning,
Every morn is the world made new.
You who are weary of sorrow and sinning,
Here is a beautiful hope for you;
A hope for me and a hope for you.

Something of this the artist meant to convey to us. Those dreamy faces suggest the hopes unfulfilled, the yearnings that never found fruition in effort, the ideals ever beyond our reach, the best of which we are capable never quite accomplished, while the fresh loveliness of each maiden in the procession suggests the opportunity to redeem the past that each new day offers to us.

As we contemplate the picture, we cannot fail to be impressed by the great curves that form a structural part of it. Trace the curve beginning with the arch of the stairs and running through the margins of the maidens' robes, another which passes through their shoulders, and still another passing through the heads of the upper maidens to be carried out through the outer edge of the steps below. These curves help to bind the picture together and add greatly to its beauty, but they also hint at high purposes, begun here to be carried out somewhere beyond our ken. May they not also signify the unfinished curves of our existence and imply that somewhere in God's vast plan these shall meet their answering curves and be rounded out in all the beauty of foreordained completeness?

CHAPTER XVII

COLOUR

THE GREATER part of the work in colour assigned to this Grade has already been taken up. The making of scales of hue, value, and intensity by the pupils of this Form will test the knowledge of the properties of colour that should have been gained in the preceding Forms.

COLOUR CHART

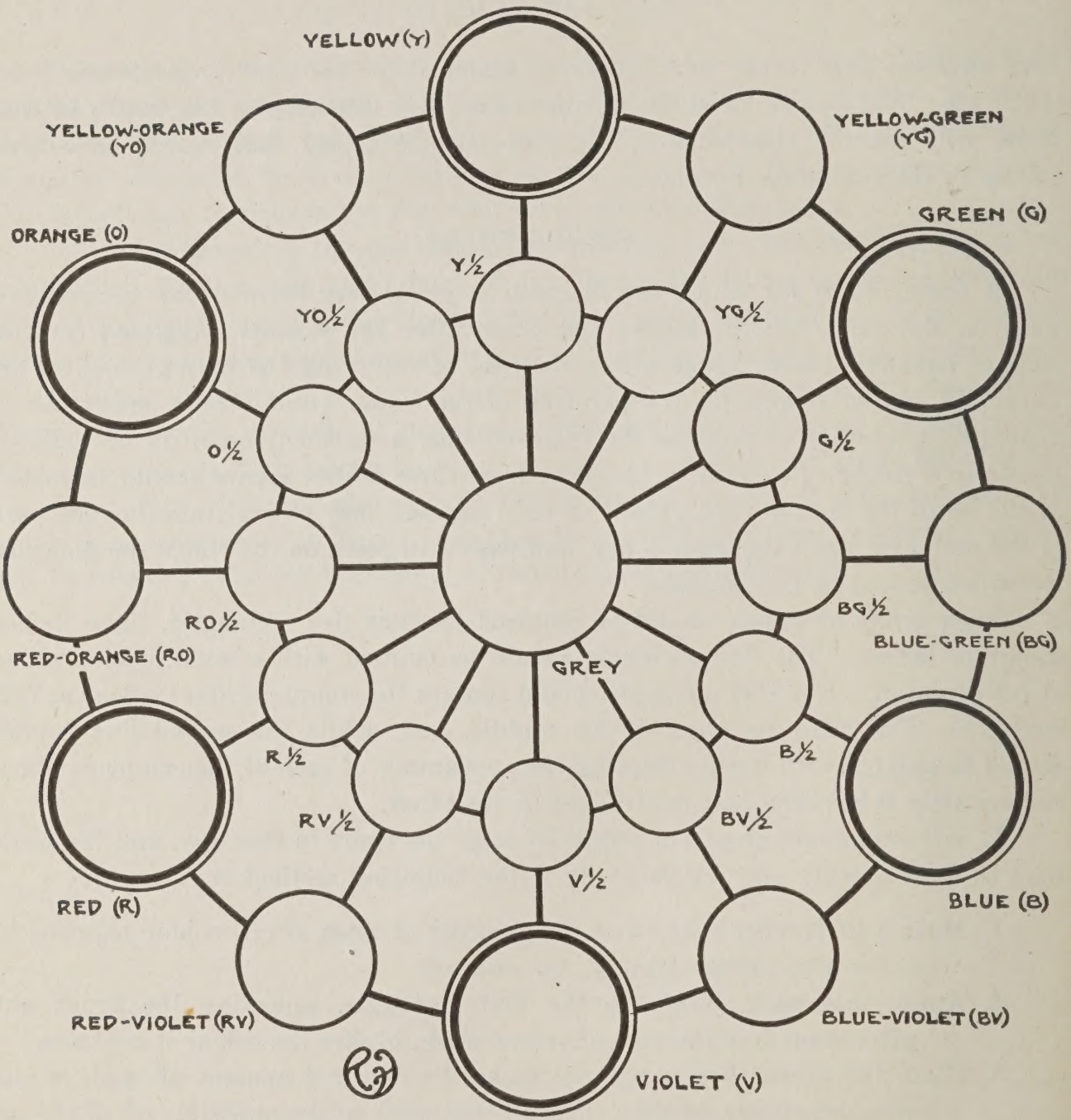
A colour chart for which the diagram is given may be made by co-operative work on the part of both teacher and class, after the manner suggested for the scale of balanced values (page 173). Instead of following the directions given in Form III, Senior Grade, for the painting of the colour circle, where one colour is floated over another to produce the required hue, a sufficient quantity of wash of the desired colour to cover a rectangle at least three inches square should be mixed in the lid of the box, so that a circle of the right size may be cut from the best part of the rectangle when the wash is dry, and pasted in place on the chart, the diagram for which should be in readiness.

Each group of pupils should be required to draw five rectangles, three inches square or larger. The first rectangle should be painted with a wash of one colour at full strength. The fifth rectangle should contain the complementary colour at full strength. The third rectangle is for middle gray, while the second and fourth should be painted with washes showing the appearance of each of the complementary colours after it has been half neutralized by the other.

It will require six groups of pupils to paint the chart in this way, and the work may be done quickly and satisfactorily if the following method is followed:

1. Make a little more than twice the quantity of wash of one colour required to cover a rectangle—yellow, for example.
2. Apply this wash evenly to the first rectangle, squeezing the brush out afterwards into the pool of yellow wash, to save the colour it contains.
3. Clean the brush thoroughly and make the required amount of wash of the complementary colour (violet in this case) in the opposite end of the lid of the box.

COLOUR CHART



4. Put this wash over the fifth rectangle, saving the colour left as before.
5. Mix equal quantities of the two washes in the middle depression in the lid. Test the resulting colour on a piece of drawing paper to see if middle gray has been produced. If not, add the colour of which it seems to have too little, and paint the third rectangle middle gray.
6. Wipe out the pool of gray that remains in the middle of the lid and mix one part of the violet with three parts of the yellow wash, to produce the half-neutralized yellow wash for the second rectangle. Test the result, so as to have it correct before applying it.
7. Wipe out the remaining pool of partly-neutralized yellow and mix three parts of violet with one of yellow for the fourth rectangle. Test it and make it correct before applying it.

Any further information required for the mixing of the colours will be found in the text for the preceding Forms.

When the chart is done, both the inner and outer circle of colours should show a related movement in hue from yellow through all the other colours back to yellow. A related movement in value should also be apparent, from yellow which is High Light, through yellow-orange and yellow-green (Light), orange and green (Low Light), red orange and blue-green (Middle), red and blue (High Dark), red-violet and blue-violet (Dark), to violet which is Low Dark.

Two different intensities of each colour are also arranged for, and two of the colours, red-orange and blue-green, being middle in value, should each show a scale from full intensity to no intensity, in three steps.

Directions for making the diagram for the colour chart are given below. If a larger size is desired, the measurements may be multiplied by one and one half, two, or a larger number, to give the required size.

MAKING THE DIAGRAM

Take a piece of thick drawing paper or cardboard, size 11″ by 13″. Draw a vertical line upward through the centre of the sheet.

At the middle of this line place a point which shall be the centre of the whole circular diagram.

With this point as centre, draw three circles, with radii of $\frac{3}{4}$″, $2\frac{1}{4}$″, and 4″ respectively.

Keeping the compass at the last radius, that is, 4″, and beginning at the lowest point of the large circle, divide its circumference into six equal parts, thus giving

the centres of the six circles, marked red (R), orange (O), yellow (Y), green (G), blue (B), violet (V). Draw these circles with a radius of $\frac{3}{4}''$.

Bisect each sixth part of the circumference of the large circle, giving the centres of the circles for the *intermediate hues,* red-orange, yellow-orange, etc.

Draw the six circles at these points with a radius of $\frac{5}{8}''$.

Join all twelve points through the centre of the diagram.

Where these lines intersect the circle having a radius of $2\frac{1}{4}''$, draw circles with a $\frac{1}{2}''$ radius.

Letter the chart according to the diagram. Rub out the construction lines not needed.

ANALOGOUS COLOURS

A group of any two, three, or four colours which are side by side in the colour circle are called analogous colours, because a certain amount of one hue is common to all. For example, in each of the analogous colours, yellow, yellow-green, green, and blue-green, yellow is present; and in the analogous colours, red-violet, red, red-orange, and orange, red is the common ingredient. Any three or four neighbouring colours chosen from the inner circle of the chart would form an analogous harmony.

COLOUR HARMONIES

Pupils of this Grade may use any of the colour harmonies taught in the preceding Forms. They may also choose colour schemes from nature or from textiles, when these are good examples of complementary or analogous harmony or exhibit colours which are all of low intensity.

When a colour scheme has been chosen for a design, the largest area should be covered with the tone which is lowest in intensity. The brightest tone should be chosen for the smallest areas, which should be carried right through the design rather than massed in one place. The medium tones in the colour scheme should be managed in the same way, so as to bring about a balance of attractions. The size of the dull areas makes up for the greater brilliance of the small areas.

DESIGN

Very little Design that is in advance of what has been taken up in Form IV, Junior Grade, should be attempted in this Grade. The principles that have been presented already should be studied from as many sides as possible, with a view to impressing them so that they will not be forgotten. Many things are manufactured

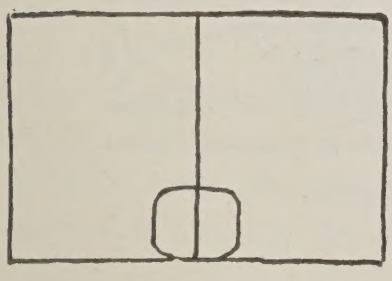
to attract the eye that are not good in design, and this fact must be reckoned with when the pupil's judgment is being trained. We tire of some things long before they are worn out, because for one reason or another, they are not suited to the purpose for which they are used. On the other hand, things which may not have attracted us at first sometimes prove so well fitted for the purpose to which they are put that they continue to please as long as the parts hold together. It is a great advantage to a purchaser to be able to judge whether an article will become a weariness to the eye in a short time or will retain its power to charm to the end. The supply will always meet the demand and, when the average purchaser prefers what is good in Design to what is merely showy, a tremendous impetus will be given to Art. Each individual who seeks to cultivate his own taste and refuses to be satisfied with what is false to the principles of good design is a potent factor in the raising of the standard of good taste in his generation and in his country.

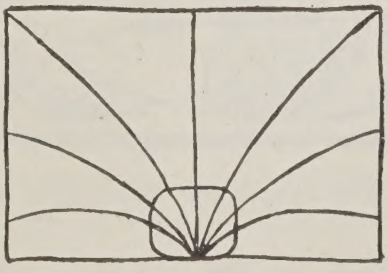
The pictorial is out of place in decorative design. The very fact that a design is a close imitation of nature is its own condemnation, and the skill that made it so has been skill misapplied. Any decoration is in bad taste that makes a surface appear to be what would be objectionable if it were real. An excellent method for training the pupil's eye to discriminate between what is good and what is bad is to encourage the collecting of illustrations of furniture, dishes, costumes, etc., from catalogues, advertisements, magazines, and other sources. These should be classified by the pupils as exhibiting good or bad design in structure and decoration. Definite reasons should be given in each case for condemnation or approval.

A comparison of two different types of the same thing might be made a profitable theme for an essay to be illustrated by clippings collected by the pupil.

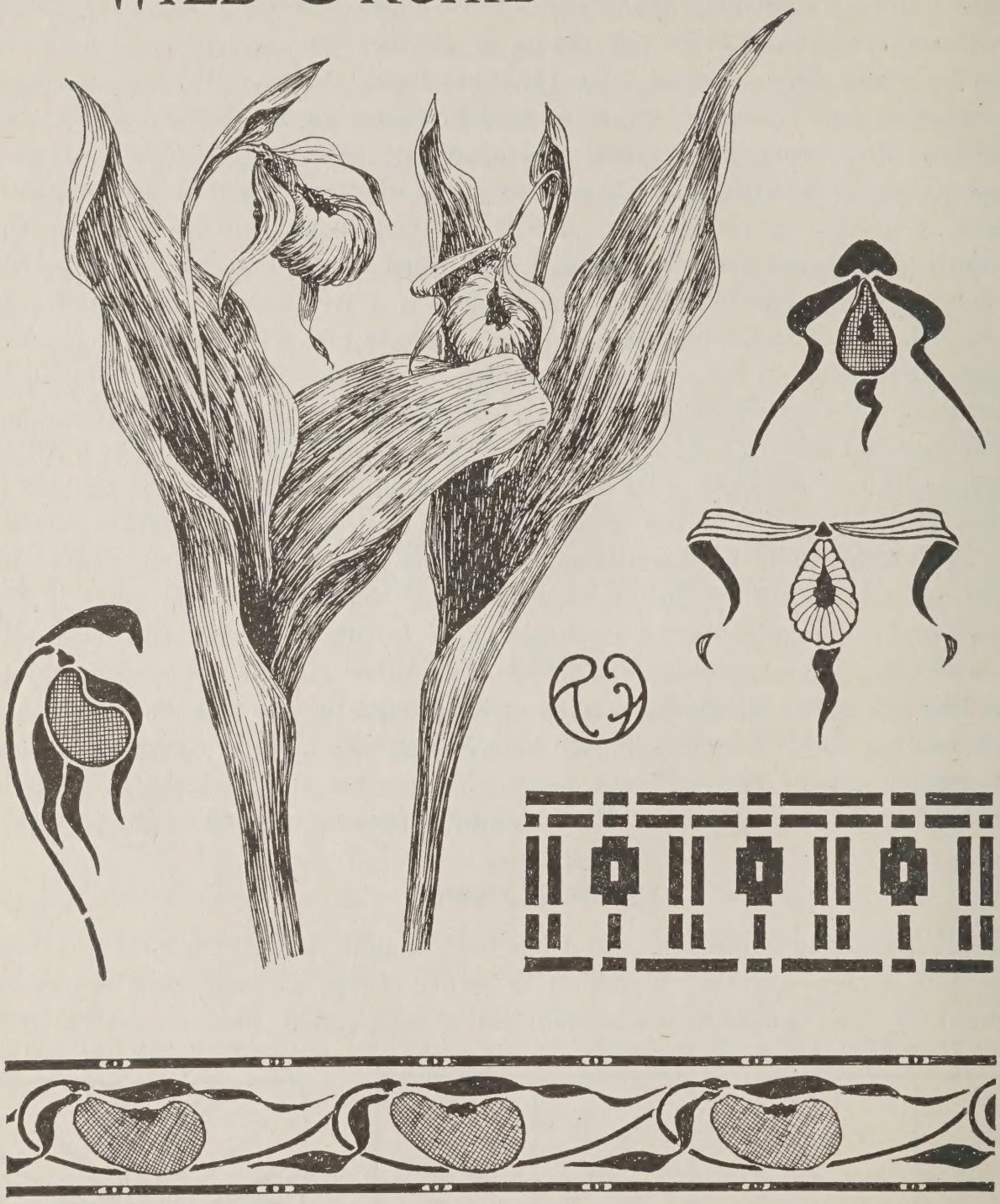
UNITS OF DESIGN

In the preceding Forms the pupil has been taught to design a unit and then modify it in such a way that it will fit or rather occupy a given space agreeably. The pupil in this Grade should accomplish a satisfactory unit of design by a



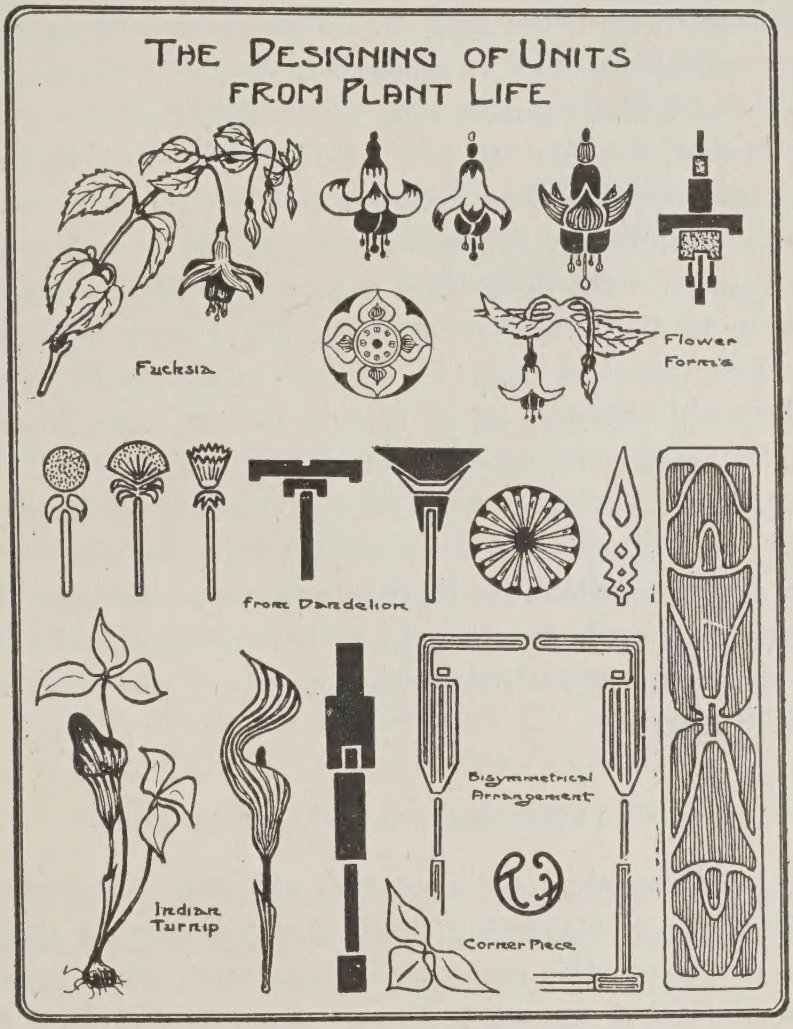


WILD ORCHID



INTERESTING BORDERS DEVELOPED FROM THE WILD ORCHID

reversal of this process. The particular type of unit that is to be emphasized here is made by the breaking up of a given space into parts that may suggest natural, geometric, or abstract forms, but must be in agreement with the laws of good design. In almost every article that is to be adorned it is desirable that the decoration should occupy a shape the contour of which is governed by the article



itself. This shape may be broken up agreeably in as many different ways as there are individual designers. It is often triangular in contour, as when the corners of a square surface are to be emphasized, or in the case of collar points, lapels, etc. It may be rectangular, kite-shaped, or circular. In fact a great many shapes different in proportion and outline may come up for consideration. The designer who has learned to manage two or three of these satisfactorily ought to be able to deal successfully with any of them. One or two different triangles, the square, and

possibly the circle, will be a wide enough range to be dealt with in class. Other shapes may come up in the home problems that are planned in school by the pupils.

The illustration shows the steps that were taken in breaking up an oblong mass into a unit of design made up of abstract shapes. In any case the first step should be the placing of what might be called a root shape, from which the different parts of the design will radiate or appear to grow. This root shape might be placed almost anywhere within the mass by an experienced designer, but Form IV pupils should be required to place it somewhere on the vertical axis of the whole mass, so as to avoid irregular balance with which they have not yet had to deal in the making of a unit of design. It is a good rule for the beginner to make the dimensions of this shape a little less than one third of the dimensions of the whole mass. From this growth-centre, lines radiating to the outside of the whole mass should be drawn in pairs. On these lines should be built the shapes that, with the central shape, are to form the unit of design. The shapes may all be separate or all connected in line, or some may be separate and others connected, but the boundaries of all should conform to, or flow in unison with, adjacent boundaries. There must also be a rhythmic relation from small to large in the size of the shapes.

The class designs should be put up for criticism after the first trial sketches have been made. The designs that are deficient in the same points should be grouped together, and suggestions for their improvement made by class and teacher. After this criticism, the pupils should redraw their designs, correcting and improving them before they are applied or finished in any of the ways suggested in the detailed Course of Study.

DESIGNS THAT MAY BE APPLIED AT HOME

In this Grade, girls are at an age when they are deeply interested in fancy work. They like to make little embroidered or braided accessories for their own costumes. The decoration of cushions, table mats, and all the other home belongings that lend themselves to embellishment appeals to them. A twofold interest attaches itself to these problems when both design and workmanship are original. The teacher should take advantage of these things and have some of the designs made in class planned for some definite home problem. The same type of unit can be put to many different uses, and the adjusting of the unit of design in size, shape, and character to the particular article of which it is to form a part, is a proposition calculated to bring out the very best of which each pupil is capable. An introductory lesson should be given, to set the class thinking and conferring on the

subject. Much of the embroidering and other ornamentation that is done nowadays is so indiscriminately applied that it tends to emphasize the commonplace. Any decoration that is too elaborate or is in any other way out of harmony with the article to which it is to be applied will cheapen, instead of enriching it. For these reasons great care should be taken to give the class the impulse to plan for a decoration that shall appear to be an outgrowth of the shape and character of the article which it is to adorn. The particular kind of stitch or other means by which the design is to be worked out should be decided by the pupil before the lesson period in which the designs are to be made, and each should come to the class with a diagram the exact shape and size of the article, or part of it, that she wishes to decorate. The articles should be brought to school when they have been completed, in order that they may be put up for exhibition. In this way each pupil is given a chance to measure, by comparison with the work of others, the degree of success he or she has achieved and to discover in case of failure what has been its cause.

Notwithstanding that our most successful designers have been men, and that boys usually take a pride in planning something for mother or sister, it is quite possible that in some classes the boys may have a notion that the making of designs for such things as collars, cuffs, and cushions is an unmanly occupation. Under such circumstances it would be well-nigh useless to expect them to do even passable work. Something that is of equal interest and as valuable an exercise as that in which the girls are engaged must be devised for them. It would be hard to imagine a boy who would not be interested in designing a monogram or a book-plate by means of which he could mark every book in his possession and thus make it distinctively his own. Therefore the boys might be allowed to design a stencil or a wood-block for one of these, while the girls are absorbed in their embroidery designs.

Sometimes the women of a district are deeply interested in patchwork quilts or hooked mats. Is there any reason why these things should be less worthy of consideration in school than the making of designs for inlaid floors or for tiles? The teacher who strives to correlate the work of the school with the needs and interests of the neighbourhood will be astonished at the inspiration that can be given and received as a result of this community of interests.

STENCILLING

This rapid and effective method of repeating a unit of design is very generally used at present both in the interior decoration of buildings and in the application

STENCILS—DESIGNED AND CUT BY FORM IV PUPILS

of patterns to fabrics of different kinds for various purposes. Stencils are frequently made from thin sheet metal or from celluloid, but any stiff, rather tough paper that will cut with a smooth edge is equally serviceable. If a wet medium is to be applied by means of the stencil, as much oil as the paper will absorb should be rubbed in on both sides of it with a piece of cloth and allowed to dry before the paper is used. This will make the paper cut more easily and will prevent the colour soaking into the edges. A coating of shellac will add to the durability of the stencil if it is applied around the edges of the design after it is cut.

The stencil must lie flat against the surface to be stencilled, therefore it is well to have it very simple and with as few points as possible that will require pinning down. The whole design is held together by a series of ties or uncut strips of paper, which add very much to its beauty when they are planned so as to seem a part of the design. These ties are usually made narrower than the cut-out parts of the design but, if they are less than one eighth of an inch in width, they may break before the stencil has been used many times. The parts cut out may form the design or the background for the design. When a unit of design that fulfils the required conditions has been made and tested, it should be traced on the stencil paper with a sharp pencil. The tracing should then be placed on a smooth, hard surface, and the shapes cut out with the sharp point of a penknife. When the pattern is being repeated, care must be taken to get the units properly spaced. A second unit, or part of it, is sometimes cut in the stencil paper to ensure the correct placing of the units, and this is fitted over the last unit painted and kept in place until the next is finished.

Water-colours may be used in stencilling when they are applied to the surface of any article that will not require washing, such as the cover of a book, programme,

or portfolio. If cloth for a curtain, table-cloth, couch-cover, cushion-top, or any other purpose that will necessitate its having to be washed, is to be stencilled, some medium that will stand washing must be used. Some varieties of crayons will serve the purpose, if the designs are pressed with a hot iron after the stencil has been removed. Dyes also may be used, but oil colours thinned with turpentine till they are of the consistency of rich cream are the most satisfactory medium. More than one colour may be used on a stencil; it is better, however, to limit the pupil to the use of one colour. For a thin, light-coloured fabric, it may be necessary to mix a good deal of white with the colour. Before beginning the actual stencilling, enough colour to complete it should be mixed up in a small saucer or similar dish.

The cloth to be stencilled should be stretched out on a padded board or on a kitchen table or a work table over which a blanket has been smoothly fastened. A carpeted floor also offers a good elastic surface and simplifies the preliminary preparations. A large piece of clean blotting-paper should be placed immediately under the part of the material that is being stencilled. This will absorb any colour that otherwise might spread in the material or soil the surface beneath it.

The best brush for the purpose has short rather stiff bristles. A clean mucilage brush can be used with good results. When the stencil has been pinned firmly in place on the stretched cloth, the brush should be filled with colour and then pressed out till it is almost dry before it is applied to the stencil. If the colour spreads, the brush is not dry enough. The brush should be held in a vertical position so that only the ends come in contact with the cloth, while the paint is rubbed in with a rapid, stippling movement until the colour is evenly distributed over the whole shape. One corner of the stencil should be lifted to see that the edges are clear and sharp before the stencil is removed. All paint should be wiped from the stencil before it is placed in position for the painting of the next unit. The stencilled material should be hung up to dry for a few days before it is pressed. If a thick, damp cloth is laid on top of the design, with a dry cloth over it, and the material is pressed with a hot iron through this until it is dry, the colours will be more permanent. Stencilled materials require as great care in washing as coloured embroideries.

An effective finish is given a stencilled pattern by outlining it with coloured floss, which is darned into the material so as to have the appearance of a woven thread. The use of this embroidered line will give the pupils an opportunity to introduce a contrasting colour into their designs.

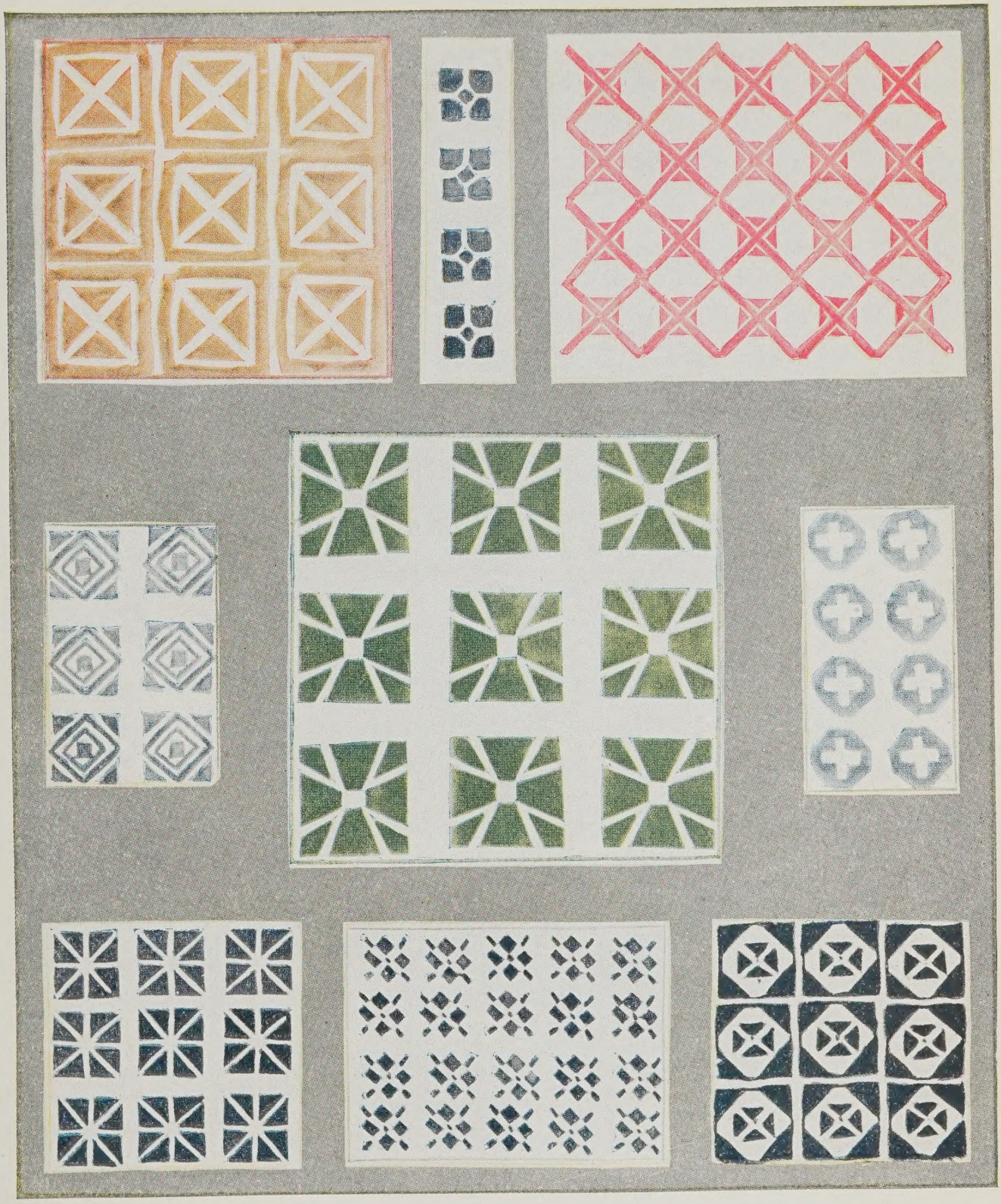
Pupils in this Form are expected to know how to make and use a stencil, but its application to woven material is optional. Explicit instructions in the art have been given here, that the desire to make the home attractive may be encouraged in the pupil.

Other ways in which the stencil may be applied in school if it is deemed desirable are: black-board decorations in chalk; black-board curtains of denim, factory cotton, or unbleached linen, etc.; sash curtains of cheesecloth or cotton voile to regulate the light.

BLOCK-PRINTING

Block-printing, like stencilling, is an easy and convenient method of repeating a pattern but, unlike stencilling, it is the background that is usually cut away, leaving the pattern in relief.

The most interesting way of making the block is to carve the design on the face of a piece of soft, close-grained wood, such as pine. The wood should be from one to two inches in thickness. The accompanying book-plate was printed from a block of this kind. Wood carving is difficult, however, and requires a well-sharpened knife and plenty of time, therefore an easier method of producing the block is desirable for use in school. When the cutting and printing are to be done the same day, the unit of design may be traced and carved on the flat section of a potato. The surface patterns facing p. 274 were made in this way by the boys of Form IV, Junior Grade. A better and more durable substitute for the wood-block may be made by glueing a piece of heavy linoleum or cork carpet of the right size and shape to a smooth block of wood and carving it as desired, or a design may be cut from hard felt and glued to a block of wood.



After the design is prepared, it may be traced with carbon paper on the surface to be cut. In the case of the wood-block, the design might first be drawn or painted in India ink on thin, nearly transparent paper, and then pasted face down upon the block. Where the two sides of a pattern are unlike, it is necessary to reverse it on the block, or the printed pattern will appear turned in the opposite direction. When the paper is quite dry, it may be oiled to make the pattern clearer. The part surrounding the pattern may then be cut away with a sharp knife having a rather pointed blade. The blade, in cutting, should be held with the edge slanting a little away from the pattern so as to produce a strong outline and prevent undercutting. The block should be cut away so as not to extend beyond the boundaries of the design. When the pattern is at least an eighth of an inch in relief and all the edges are clear and sharp, it is ready to be used for printing; if it does not print evenly, the block may be rubbed down to an even surface on a piece of fine sand-paper.

The colour desired may be mixed with water to the consistency of cream and, as it should be slightly sticky, a drop of mucilage or photographer's paste may be added to it; it may then be painted on the surface of the block for each imprint that is made, or a pad made from a piece of felt or from two or three layers of blotting-paper may be laid on a plate or any similar flat surface and saturated with the prepared colour.

The paper to be printed should be laid on several thicknesses of smoothly-folded newspaper, and the block should then be pressed first upon the pad and then upon the paper for each imprint. A sharp tap on the block with a hammer will make the imprint clearer.

The book-plate offers a fascinating though rather difficult problem in wood-block carving that should appeal to Form IV pupils.

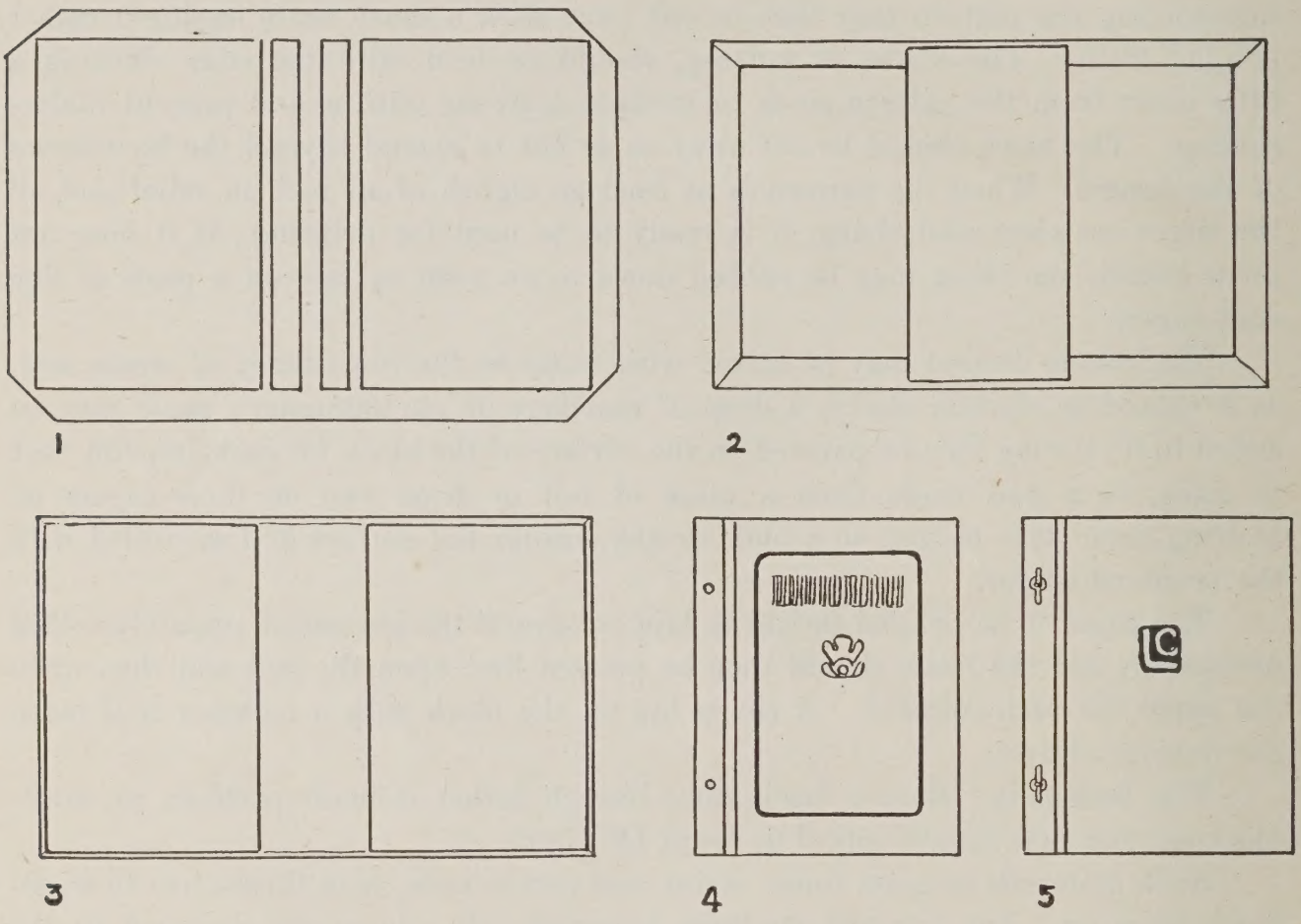
Such materials as grass linen, scrim, and cotton voile, lend themselves to wood-block printing. For printing on these materials, oil colours are prepared in the same way as for stencilling, and the material to be printed may first be dampened evenly and then stretched on a smooth, elastic pad made of several thicknesses of flannelette or Canton flannel.

OPTIONAL PROBLEMS IN APPLIED DESIGN

BOOK COVER

A serviceable and attractive book cover that can be made of any desired size differs very little in construction from Clipping-case No. 2, which is handled in the text for Form IV, Junior Grade, except that it requires four pieces of mill-board

instead of two. The paper which is to form the leaves of the book must be chosen before a cover can be planned to fit them. The paper for looseleaf note-books, which comes in different sizes in packages, will be found convenient for an ordinary-sized book. Note-paper may be used if a smaller book is desired. The following materials are required to construct a cover that will fit a leaf $6\frac{3}{8}''$ by $8\frac{3}{8}''$ in size:



BOOK WITH HINGED COVER

1. Ready to have the laps pasted; 2, ready for the lining papers; 3, with lining papers pasted in position; 4, front of cover of finished book; 5, back of cover of finished book

A piece of cover cloth $15\frac{1}{2}''$ x $10\frac{1}{4}''$
A piece of cover cloth $4''$ x $8\frac{1}{2}''$
Two pieces of mill-board $5\frac{3}{4}''$ x $8\frac{3}{4}''$
Two pieces of mill-board $\frac{3}{4}''$ x $8\frac{3}{4}''$
Two pieces of lining-paper $5\frac{1}{2}''$ x $8\frac{1}{2}''$.

Also a ruler, a well-sharpened pencil, a pair of scissors, a newspaper to protect the desk, paste, a damp cloth, and a dry one for wiping paste from the fingers.

The steps to be followed in making the book cover are given below:

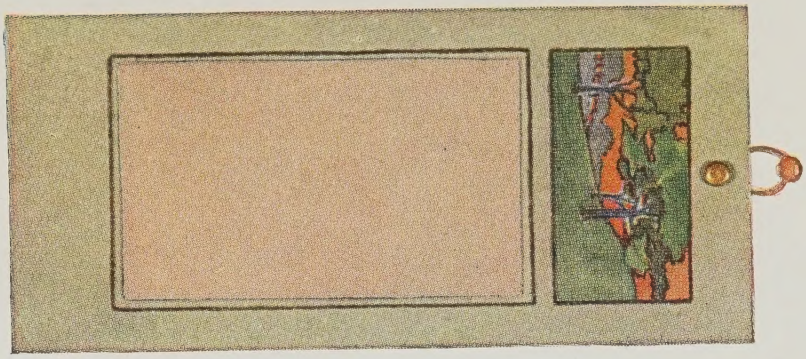
1. When everything is in readiness, place the $15\frac{1}{2}''$ by $10\frac{1}{4}''$ piece of cloth the long way across and wrong side up on the desk.
2. Lay the $\frac{3}{4}''$ by $8\frac{3}{4}''$ strips of mill-board one-half inch apart down the middle of the cloth, so as to allow a three-quarter inch margin at top and bottom. Care must be taken to keep them the same distance apart for their full length.
3. Place one of the $5\frac{3}{4}''$ by $8\frac{3}{4}''$ pieces of mill-board one-quarter inch to the left, and the other one-quarter inch to the right of the two narrow strips of mill-board, keeping the space between of the same width for the full length, and allowing $\frac{3}{4}''$ margins at top and bottom.
4. Hold the four pieces of mill-board firmly in position and in a straight line at top and bottom, while the cloth margins are folded up and creased all around.
5. Remove the mill-boards and measure the two sides of the creased inclosure, also the top and bottom, to see that they match properly and are correct in length.
6. Paste the two larger pieces of mill-board in the places creased for them, keeping the space between them even at top and bottom.
7. Paste the narrow strips of mill-board one-quarter inch in from the larger pieces, keeping the space between even from top to bottom.
8. Cut across the four corners of the cloth one eighth of an inch beyond the outer corners of the mill-board.
9. Paste the long laps firmly and snugly up on the mill-board, keeping the edges between the boards even with them.
10. Paste the short laps firmly in place, tucking the corners in well with plenty of paste.
11. Paste the $4''$ by $8\frac{1}{2}''$ strip of cloth in place down the centre of the inside of the cover, so as to conceal the narrow boards and lap over the inside edges of the larger ones. Smooth it well between the boards with plenty of paste, so that the two thicknesses of cloth will adhere to each other and make a firm back and neat hinges for the book.
12. Paste the lining papers in place, so as to cover the laps to within one eighth of an inch of the outer edges of the cover.
13. Lay the cover flat under a heavy pressure until it is quite dry.

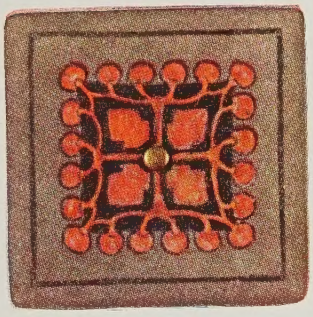
When the design is being planned for the book cover, the pupil should not be allowed to lose sight of the fact that good spacing and a well-lettered title have more to do with making the cover attractive than any amount of decoration. Because of this fact, the margin and the size and placing of the title are the first things to be considered. The marginal line may be developed into a simple border or may be widened into a strap, which may be left plain or may have the corners strengthened by a unit which should be a natural development of the strap and in harmony with it. Frequently the marginal line is discarded after it has helped to determine the placing of the title.

Any decoration that is added should be of such a nature and so placed as to be subordinate to the title. It is not necessary that the decoration should indicate the nature of the subject treated within the book, but it should not be at variance with it. We might with perfect propriety have a landscape or a figure composition in flat tones on a Book of Addresses or on a Post-card Album. A fruit composition or a composition of utensils or dishes suggesting a pantry shelf would be suitable on a Book of Recipes; while a Sketch Book would have a wider range of possibilities in this sort of decoration. The use of a more conventional decoration is calculated to produce a more sedate cover design which will not be likely to be out of harmony with the contents of any book. The ideal cover is one which awakens a desire on the part of the observer to investigate the book and leaves with him no subsequent sense of having been imposed upon. The instructions concerning book covers that have been given in previous Forms should be read for further suggestions.

The designs should be planned on paper the exact size of the cover, after a number of small trial sketches have been made, and should be criticized by the class and corrected by the individual pupil before they are traced on the covers. The colours to be used should be tested on a piece of the cover cloth, to see that they are in harmony with it and yet of sufficient brilliancy to enhance the design. Black with one colour is the combination that is most generally found satisfactory.

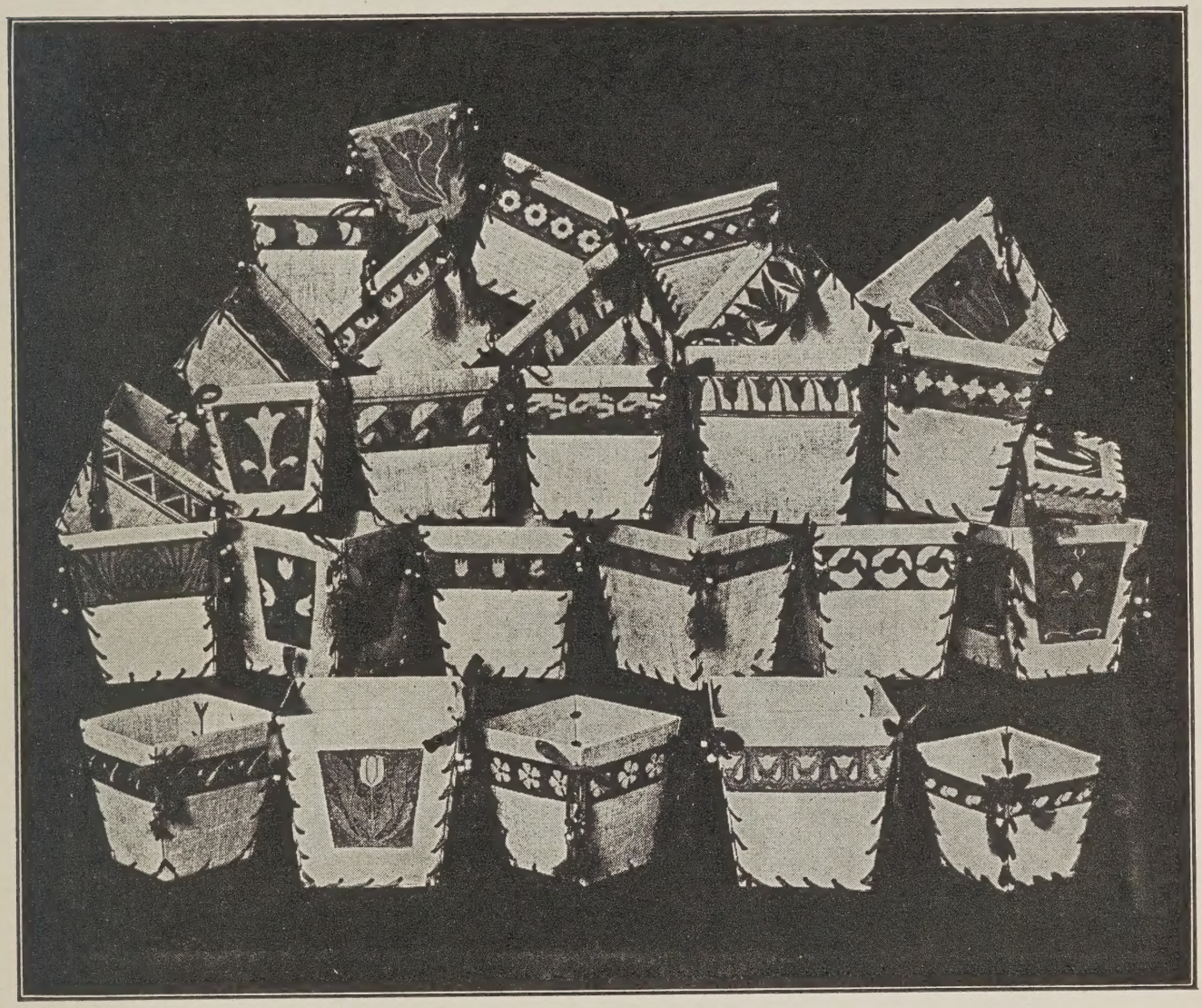
The leaves may be laced into the book as the envelopes were in Clipping-case No. 1 in Form IV, Junior Grade, or brass paper fasteners with rounded points may be passed through small crosswise slits in the narrow boards at the back of the cover and through the leaves between them to hold them in position. Small brass discs may be obtained that will keep the ends of the paper fasteners firmly in place on the under side of the cover.





PLANT
STUDY

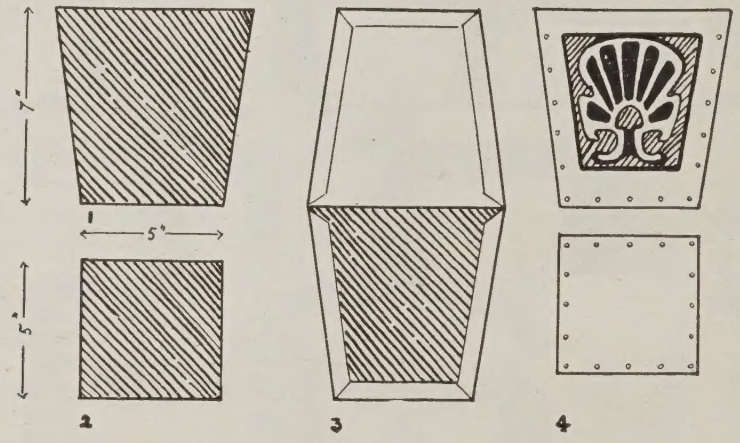
CLIPPINGS



BASKETS MADE BY NORMAL SCHOOL STUDENTS

WASTE-PAPER BASKET

The illustrations show a basket that may be made to fill various uses. Its dimensions will depend largely on the purpose for which it is intended. The larger it is, the heavier should be the mill-board of which it is constructed. Seven inches high, by seven inches wide at the top and five inches wide at the bottom, is a convenient size for a small waste-paper basket or for a scrap basket for use on a sewing table. The basket may be made with slightly more or less spread than this at the top, or it may be made of the same size at top and bottom. Care should be taken to use dimensions that will result in a basket that is both useful and of pleasing proportions. Any thin, rather strong cotton or linen fabric, even in texture, of a plain colour that is of low intensity, and light enough in value to take paint may be used in covering the mill-board. A very light-weight linen canvas of the kind used for stiffening the collars and lapels of coats is a very satisfactory material for the purpose, as it is serviceable and agreeable both in texture and colour.



WASTE-PAPER BASKET

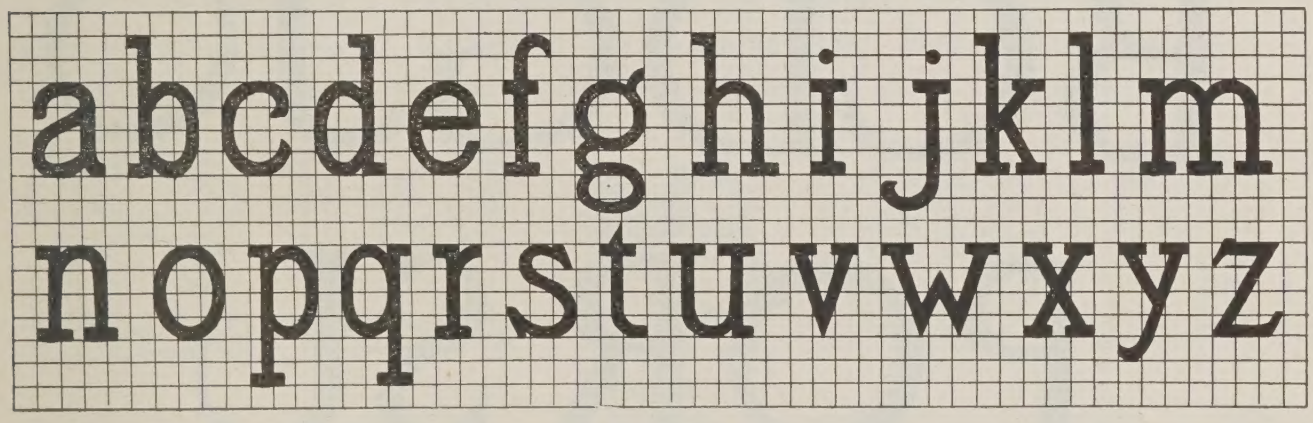
1. Mill-board for one of the four sides of the basket; 2, mill-board for the bottom of the basket; 3, one side with lining ready to be pasted down (cover cloth cut double); 4, side and end ready to be laced together

The mill-board pieces are covered separately and may be lined with paper as the two pieces of the clipping-case were on page 279. Only the laps, however, need pasting. If there is sufficient material to make lining and cover alike, the cloth should be cut double, so that the fold will come at the top of the basket. To cut the cloth double, lay two of the mill-board sides on it, top edge against top edge, and mark around them. Allow three quarters of an inch all around for laps and cut out four

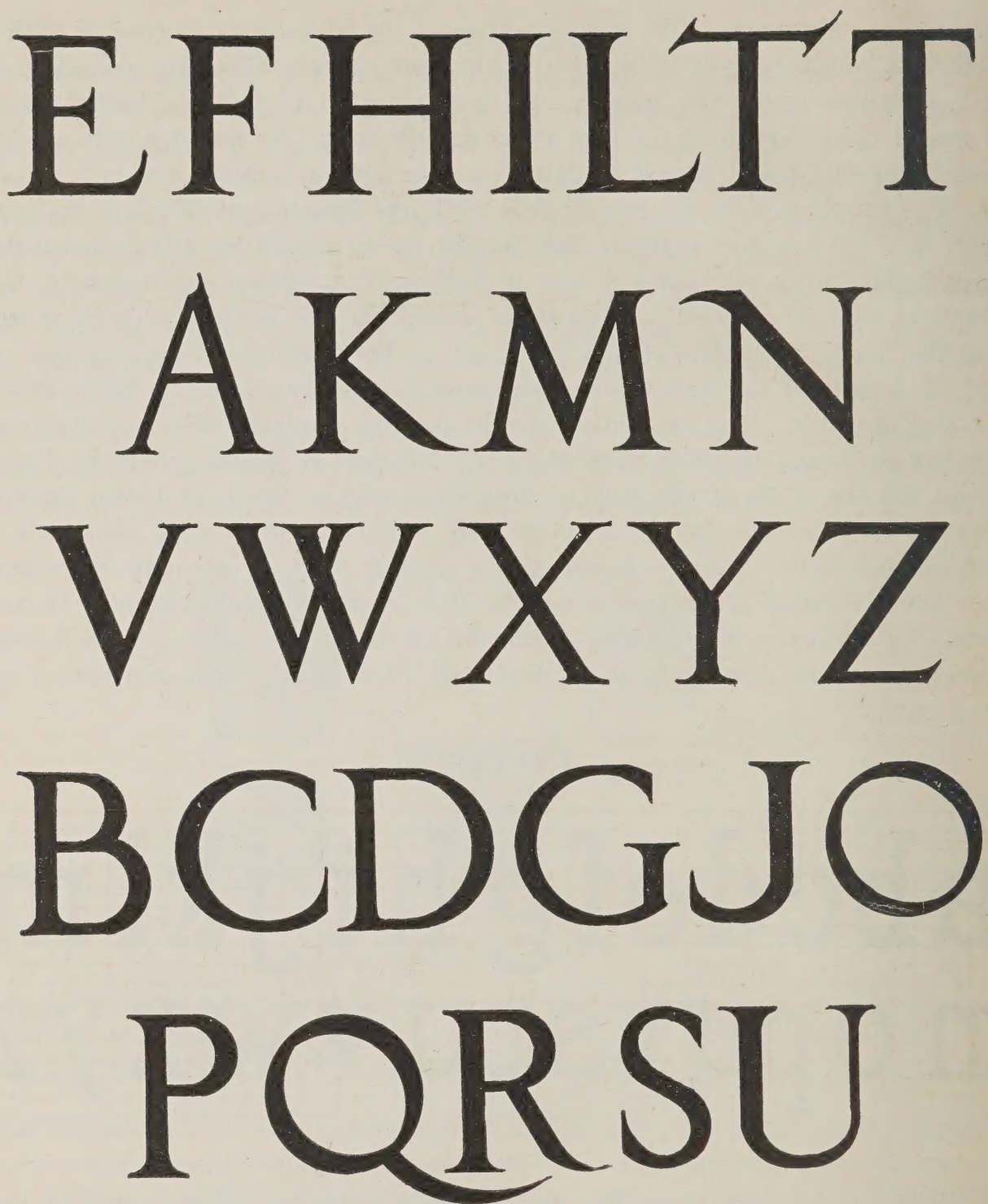
pieces of the same size. The square bottom of the basket may be covered with the cloth in a similar way or with paper of the same colour. The laps should be well and exactly creased, the corners cut as explained in previous lessons, and a V-shaped piece cut out of the laps at the middle fold. As the laps only are to be pasted, the mill-board should be fitted in place very accurately and kept with its top edge snugly against the middle fold while the bottom and side laps are pasted upon it. The laps of the upper half for the lining should be well flattened down against the lining with paste before it is brought smoothly down over the mill-board, so as to fit it exactly. The edges should then be pasted firmly in place, so that the inside of the basket will be as neat as the outside. When the four sides and the bottom of the basket have been covered, they should be put under pressure till they are dry. The decoration should then be applied. The basket is laced together by means of eyelet holes which are punched at regular intervals along all except the top edges of the basket. Silk cord, narrow braid, or brown shoe-laces may be used for the lacing. One or two Indian beads of good colour on the fringed ends of the lacing cords will give a pleasing touch of colour to the basket.

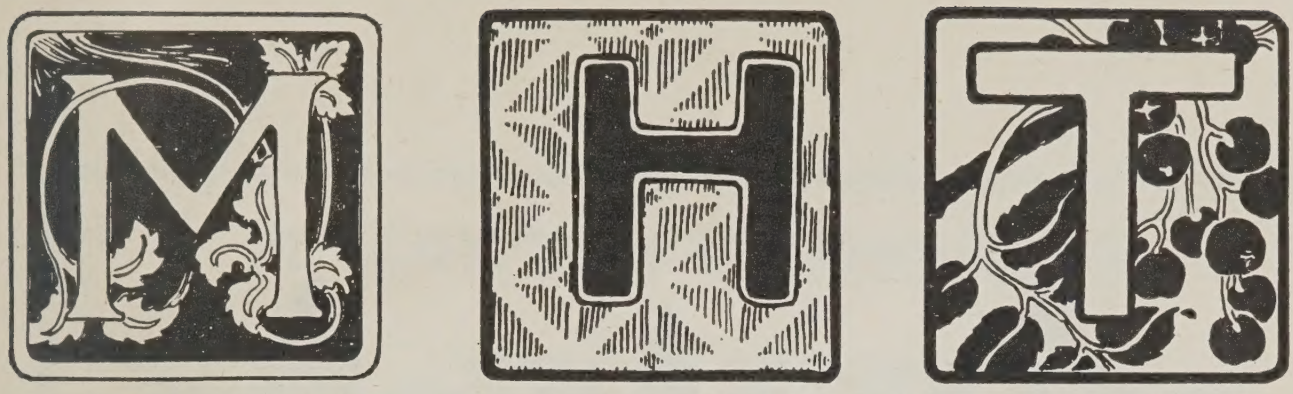
The decoration of the basket may be done in water-colours and may be in the form of a border so placed as to divide the height of the basket into well related spaces, or in the form of a panel that will allow undecorated margins of good proportions.

LETTERING



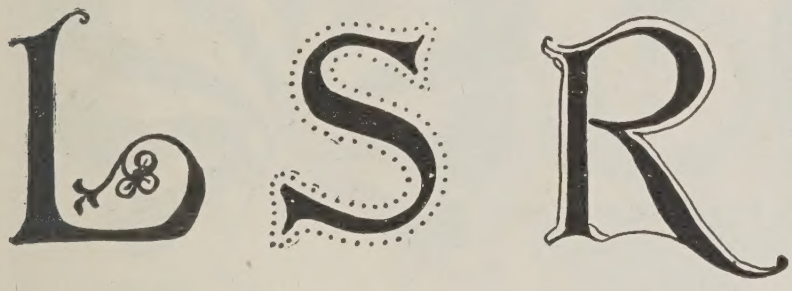
The lettering for Form IV, Senior Grade, need not differ from that in the Junior Grade, but, as the pupil should be able by this time to letter with a certain amount of facility, a class that as a whole is able to do good lettering might be permitted to use Roman capitals and the small, or lower case, alphabet.


EFHILTT
AKMN
VWXYZ
BCDGJO
PQRSU



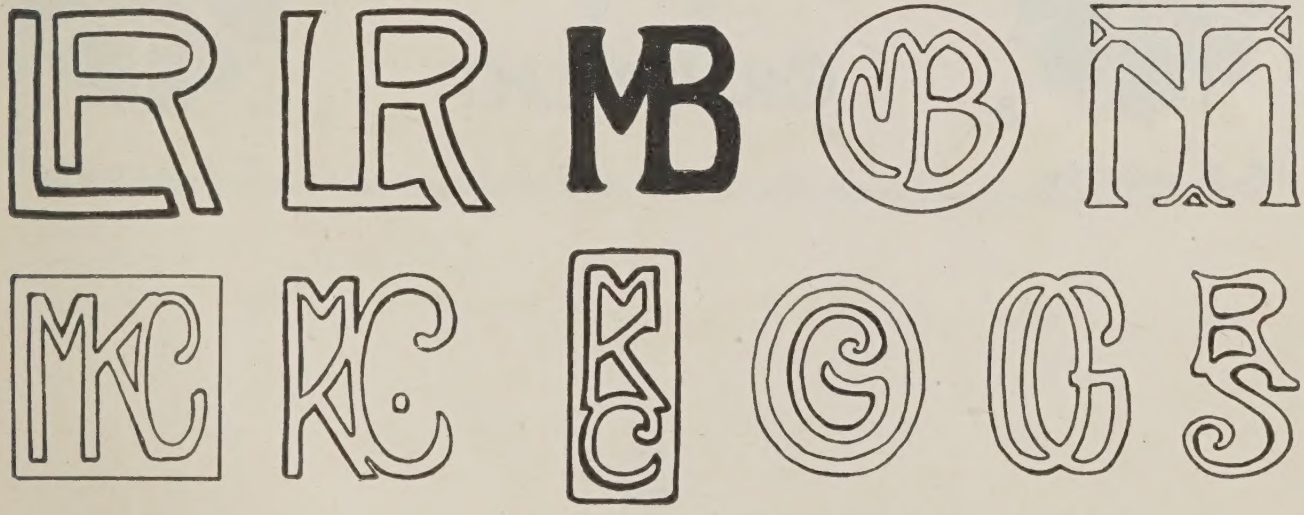
Initial letters, such as are shown in the illustrations, may be planned as problems in Design and used with lettered mottoes.

When an essay is written, it may be desirable to add to its attractiveness by using a decorative initial. A decorative initial used with script should be in harmony with it, and must therefore be semi-formal in character and readily drawn with the pen. It may be in black or colour and may be outlined with the same or a contrasting colour, or a row of evenly-spaced dots may take the place of the outline.

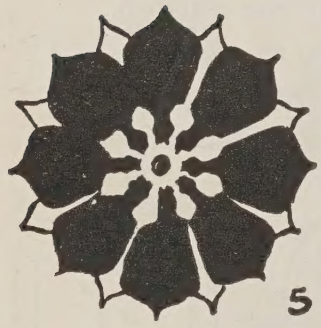


SEMI-FORMAL INITIALS

The designing of a simple monogram is not difficult, and the average Form IV class is keenly interested in working out such a problem. Some examples of the kind of monogram that might be attempted in this class are given in the illustrations.



GREEK & ROMAN ORNAMENT



R. Rosette

R. Rosette

☆ Egyptian Ornament ☆

Teacher: Look up, in the class, do not let us completely [illegible]
[illegible] efficient, until you grasp the nature of the universe.

Puzzled pupil: - Are Boris pathos that the killing